THE Coybean Digest

OFFICIAL PUBLICATION . AMERICAN SOYBEAN ASSOCIATION



The January delegation and President Albert Dimoni

Report on ASA's 1956 Convention

Council of America

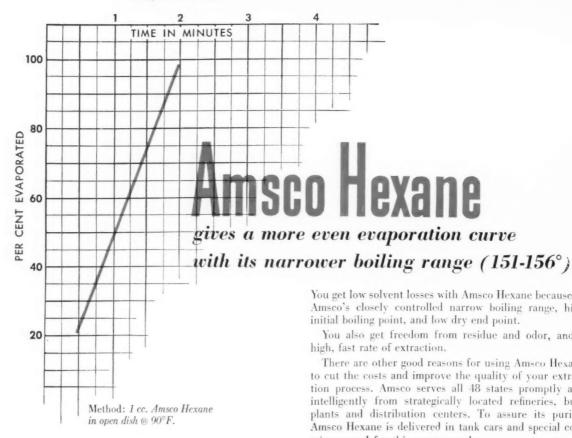
Chicken barbacus closes convention

First Report on the Soykean Council of

SEPTEMBER • 1956

VOLUME 16 • NUMBER 11

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THE Soybean Digest

HUDSON, IOWA

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THE SOYBEAN DIGEST

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Objectives of the American Soybean Asociation include the bringing together of all persons interested in the production, distribution and utilization of soybeans; the collection and dissemination of the best available information relating to both the practical and scientific phases of the problems of increased yields coupled with lessened costs; the safe-guarding of production against diseases and insect pests; the promotion of the development of new varieties; the encouragement of the interest of federal and state governments and experiment stations; and the rendering of all possible services to the industry.

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Tackle the toughest soybean harvest and make every row yield more

Take a tangled, wind-snarled field of soybeans, so weedy you can hardly see the beans—that's where these MM Harvestors shine! MM guard fingers get down as low as 2 inches above the ground to pick up flattened vines... high speed MM sickles shear vines quick and clean, without pod-loosening vibration . . . self-adjusting chain raddles (on the "88" and Uni-Harvestor) feed the cylinder at a steady, full-capacity rate in every stand without slugging. That's how MM harvesting boosts soybean yields and soybean profits!

From cylinder to grain tank, your soybeans get the full benefit of the most advanced threshing-separating-cleaning action ever built into a combine! MM rasp bar cylinders and one-piece all-steel concaves thresh with a gentle "rubbing" action that prevents cracking beans or chewing stalks. Full-width straw racks, sloping grain pans, big capacity cleaning shoes and Scour-Kleen attachments (extra equipment) deliver your beans to the tank clean . . . for premium prices.

This year, give your soybeans the profit advantage of MM Harvesting. Ask your MM Dealer for *all* the facts on MM Harvestors. Place your order *now*—be sure you're ready when your beans are ripe.

MINNEAPOLIS - MOLINE MINNEAPOLIS 1,



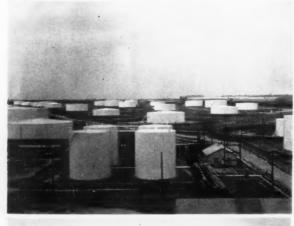
Self-propelled Uni-Farmor capacity— MM UNI-HARVESTOR

Other machines had to pull out of this bean crop—the Uni-Harvestor walked right through. Mounted on the new MM Uni-Tractor, you get 20% more power, hydraulic power steering, Uni-Matic hydraulic header control and variable speed drive. The header takes a 9-foot cut. The same Uni-Tractor mounts Uni-Farmor machines for forage-chopping, windrowing, corn husking or picking and shelling in one trip.



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Every cent you spend buys unbeatable performance when you pick this MM "69" Harvestor. It's so light-running a 2-plow tractor with power take-off handles it. With a 69-inch cut and straight-through, full-width threshing and separating, you get big capacity...clean beans. You can buy the "69" with a header for quick-attaching windrow pickup... with a compact, powerful V-4 engine or PTO drive.







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- 1. Straight-in-line header cuts wide enough to handle two big, bushy rows easily, even when plants are badly lodged.
- **2.** Big 28-inch cylinder keeps straw thick enough to cushion beans against damage. Spike teeth increase capacity . . . let you operate the cylinder at slower, more gentle speeds.
- 3. Stretch-out straw rack is extra long for maximum separation. Vigorous action shakes out every bean into full-length grain pan.
- **4. Famous Case Air-Lift Cleaning** maintains constant air pressure under sieve to float off chaff and dirt. Pressure controlled easily by quick-change fan speeds. (Roto-Cleaner available.)
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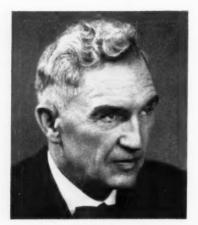
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CASE "75" 7-FOOT COMBINE

TEST-DRIVE THE NEW 3-PLOW

12-SPEED...





John P. Gray



Jackson L. Cartter

Honorary Life Members-1956

John P. Grav

DR. JOHN P. GRAY is a man of wide interests and versatile talents. He has been a teacher in the rural schools, a teacher in Normal College, and a county agent, in addition to his life work as agronomist and professor of forage crops research at Louisiana State University and Louisiana Experiment Station.

He served in the U. S. Navy in World War I and has been active in The American Legion. His hobbies include landscaping and photography and square dancing. He has organized two square dance clubs.

Dr. Gray's contributions to the soybean crop have been impressive. He has been called the Deep South's most outstanding soybean breeder and promoter of the crop. He has been working with soybeans many years. He pioneered soybean production and usage in the South, and was first to popularize edible varieties in Louisiana.

He has introduced a number of high yielding, high-oil-content soybean varieties including Magnolia, Pelican, Acadian, LZ, Nanksoy, Improved Pelican and Louisiana selection of Seminole, an edible variety.

He persuaded the Louisiana Superintendent of Prisons to erect a soybean processing plant at Angola State Prison Farm. The oil was used in paint and also food products and the meal in preparation of various food products.

Perhaps no man has been more consistent in attendance at American Soybean Association meetings. He has missed few, if any, of them and

1956 CONVENTION
ASA in print

has appeared on the Association's programs. He was president of the Association in 1933 when the annual meeting was held in Louisiana, and a member of its board of directors for a number of years.

Dr. Gray received his bachelor of science and his masters degrees at Oklahoma A & M College, and his Ph. D. from Iowa State College.

He has about 50 publications and reports on various farm crops, including a number on soybeans, to his credit.

He is currently chairman of the crops and agronomy section of Southern Agricultural Workers and vice president of the Southern Branch of American Society of Agronomy.

Jackson L. Cartter

IT IS FITTING that Jackson L. Cartter should be elected an honorary life member on the 20th anniversary of the founding of the U. S. Regional Soybean Laboratory. He helped to organize the Laboratory and has been associated with it since the beginning. First, he was director of the agronomic section of the Laboratory. When the chemical section of the laboratory was moved to Peoria, he became director, which position he now holds.

As a result of the program of the U. S. Regional Soybean Laboratory, 16 improved varieties of soybeans have been released jointly by the Laboratory and the various states.

Prior to his association with the Laboratory, Mr. Carter as U. S. Department of Agriculture agent, tested, multiplied and classified many thousands of foreign introductions, a number of which were later released as new varieties.

Mr. Cartter has been called, "One of the outstanding workers and lead-

ers in breeding research on soybeans. The contributions of Jackson L. Cartter and his collaborators have increased the oil content of soybeans, improved their yield, and increased their disease resistance. These contributions have directly and immeasurably benefitted the farmers, the processors and grain handlers, and the American public." And it might be added, they have increased the income of American soybean producers by many millions of dollars yearly.

Mr. Cartter was born in Brookfield, Mo., in 1902, and moved to Montana in 1910. He graduated from Montana State College in 1925, received his masters degree at Iowa State College in 1927, and later did graduate work at the University of Wisconsin.

From 1928 to 1933 he was agronomist for the U. S. Department of Agriculture at Holgate, Ohio. From 1933 to 1936 he was agronomist at the U. S. Department of Agriculture Experiment Station, Arlington Farm, Va.

In addition to administering the affairs of the U.S. Regional Soybean Laboratory, Mr. Cartter has continued his research work. He is author and co-author of about 15 publications.

In 1949, Mr. Cartter represented the Department of Agriculture abroad in studying the possibility of expanding the soybean crop and markets in several European countries.

He is a member of the advisory board of the National Soybean Crop Improvement Council. He has long been active in the American Soybean Association, and has often appeared on our programs, including the program of this convention. He was co-chairman of arrangements for this year's meeting.



What is a Farm Girl?

We've all seen her thousands of times . . . but what is she really, this farm girl?

Well, to her brother, she's just a girl.

The librarian sees her as a quiet child who reads a lot.

Her mirror sees a face untouched by pain.

The girl's cat sees her as food and drink.

To her father, she's a help, a joy, and the face of her mother's youth.

Her grandmother sees her as another little girl who

likes to dress up in old clothes.

And to the newest <u>calf</u>, she's a face on the other side of the fence.

To her friends, she's a fun-loving, dancing, singing being. Her Sunday-school teacher sees her as the little girl who's always early.

And her mother sees in this girl her dream of a better life.

There's the answer. The farm girl is many things to many people. This girl, however, does have one universal quality... and this is hope. She is tomorrow's mother and the mother of generations to come, generations of strong, silent, patient people who live and serve all men because they till the soil. She is the farm girl becoming the farm mother, and generations of men will live because she has lived. She has in her the dignity of labor, the strength of courage and wisdom of patience.

The farm girl of today is the woman to whom we must look for our tomorrow. Tomorrow, the job of today's farm girl will be to raise her children and to work beside her husband to provide the crops that feed America's families and supply American

industry. For more than 75% of our total farm crop is changed in form for industry and the consumer by companies such as Cargill, companies known as Creative Processors

Today in Cargill's research centers and test farms, skilled researchers are working for this girl's future, too. Cargill researchers are working to find easier ways of farming, and to find new uses for the farm crop, thus helping assure the farm girl of a better future, and a more rewarding life.

Our pledge to the farm girl is this: You can count on our constant support of the free farm economy necessary to your future. Through research we will do all in our power to help make your life the kind of life you, as a farm woman, will deserve. We at Car-

gill are dedicated to your better life. For more than 90 years we have served your family—we will continue to serve you.

Through service and research, we have won the reputation as friend and processor to the American Farmer. We shall continue to work to be worthy of *your* friendship, too.



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ate News

1956-57 MARKET OUTLOOK Sept. 6, 1956 Hudson, Iowa Vol. 4, No. 17

U. S. Department of Agriculture's Sept. 1 crop estimate will be out by the time you read this—or shortly afterward. Washington was expecting a substantial increase above the August estimate of 443 million bushels, and also some increase in the cotton crop. (Leslie Analytical Organization, Columbus, Ohio, estimated the soybean crop as of Sept. 1 at 448.4 million bushels.)

Should these crop prospects materialize, the supplies of food fats other than butter at the start of the new marketing year Oct. 1 may exceed that of a year ago, creating export supplies at least as large as last year's total.

USDA officials are now estimating soybean exports for this season ending Sept. 30 will run close to 70 million bushels, up 5 million from earlier estimates. They're estimating 70 million, and maybe more, for next marketing year.

USDA is confident there will be plenty of crushing capacity to handle the anticipated soybean crush next season—but screw press plants and possibly some hydraulic ones may be put into use.

Ninety-six percent of the 1955 soybean crop is estimated by USDA to have been crushed by the solvent extraction method. Crush through July totaled about 241 million bushels, and is likely to run around 20 million bushels a month during August and September.

In view of the large crop coming on, a huge loan program is anticipated by USDA this coming season. Crushers will be in a position to be somewhat more choosy in taking beans than they have in recent years. However, USDA studies indicate that modern processing plants have such a high capital investment and skilled labor requirements that they cannot afford to wait around to get their own price for beans, even in a big crop year.

USDA studies have shown that in the past it has paid farmers to store soybeans in 4 out of 5 years.

HARVEST OF CROP

Some harvesting of soybeans in southern Indiana and southern THE NEW Illinois took place in late August. Harvest also started in a limited way in northwest Missouri and possibly some other places.

However, it appears that early September harvest will not be at all large. Our reporters indicate that in most areas combining will not get under way until about the normal time-or somewhat later than 1955 when dry hot weather in August and September hurried harvest along.

J. E. Johnson, Champaign, Ill., says harvest is at least 2 weeks away in the heavy-producing central Illinois area, and that it will be considerably later than last year.

Combining is expected to start at about the same time as last year at Lafayette, Ind., with Hawkeyes being harvested about Sept. 25. Leaves are turning yellow and falling now.

Glenn Pogeler, North Iowa Cooperative Processing Association Mason City, says harvest in his part of Iowa will be a week later than in 1955 when drought sped it up.

The Weather Bureau reports that warmer weather is needed in Minnesota to mature the bulk of the acreage before the usual frost date. In Ohio the crop is generally a week or two later in development than in 1955, and there is concern about possible frost injury.

ARTICLES APPEARING IN LATE NEWS ARE NOT TO BE REPRINTED WITHOUT THE PERMISSION OF THE AMERICAN SOYBEAN ASSOCIATION.



FEW NEW

Farmers have shown little interest to date in new crop sales CROP SALES and advance sales have been few. Johnson at Champaign, Ill., calls them the smallest in many years in his area. Bache & Co., Chicago broker, reports "disappointing" bookings of new crop beans.

> Trade News Service, New York, predicts a brisk demand for early marketed soybeans from processors with active competition from exporters, and sees the possibility of a widespread holding movement on the part of farmers this fall.

REPORTS ON CROP CONDITION

Kansas will have a wide spread in yield per acre, from 10 to 50 bushels per acre. Some early beans look very good, but late beans are hurt by lack of moisture plus high temperatures. Rain is reported to be needed in Oklahoma, North Dakota and parts of the Midsouth.

R. E. Hodgson, Waseca, Minn.: "I have never seen beans look better. The better farmers are doing a good job of controlling weeds. Most fields look excellent."

H. V. Latham, Latham Seed and Equipment Co., Inc., Belhaven, N. C.: reports by far the best prospect ever. Eastern North Carolina should average 30 bushels per acre. The South Carolina Weekly Weather and Crop Bulletin reports that good rains over much of that state have improved the crop outlook.

GET RID OF VOLUNTEER CORN

Weeds are more prevalent than usual in many northern areas due to the recent rains, and volunteer corn will also be bothersome at harvest time. Cornbelt farmers have been urged to get rid of the ears from all volunteer corn in soybean fields before combining to avoid penalties. It is impossible to remove kernels of corn from lots of soybeans during cleaning operations and buyers strenuously object to them. This is particularly true of export markets.

JAPANESE

USDA reports that Japan has announced that it will restore a TARIFF 10% import duty on soybeans as of Oct. 1. This duty, which would hamper U. S. soybean exports to Japan, has been held in abeyance for some time. Reasons for the proposed restoration of the duty are seen as:

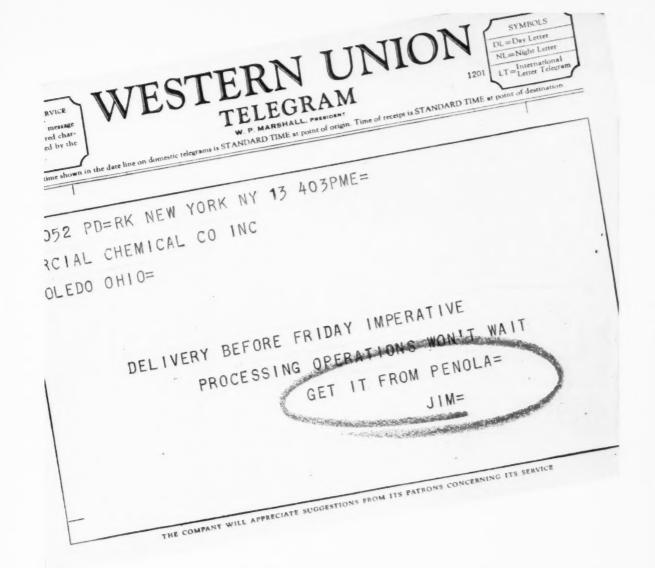
1—To produce revenue.

2—Retaliation against U. S. restrictions on imports of Japanese cotton and manufactured goods.

	Cash prices Aug. 31	
Soybeans, No. 2 yellow, Chicago, bu.	.\$ 2.36	
Soybean oil meal, Decatur, ton	49.00	
Soybean oil, crude, Decatur, lb.	111/4	

	farmers for old crop No. 1 soybeans Aug. 31	to farmers for old crop No. 2 soybeans Aug. 31	farmers for new crop soybeans Aug. 31	price for bagged soybean oil meal Aug. 31
III	\$2.33		\$2.16	
Ind	2.12		2.11	\$82.50
Iowa	2.15		2.03	75
Kans	2.04	\$2.04	2.04	66
N. C	2.20			
N. Dak	2.00			
Okla	2.00	2.00		71
Tenn	2.00			55
Va		2.15		

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ASA Meets Connected

ASA's new officers: I. to r. Sawyer, Dimond, Strayer.







VIGOROUS assaults on the problems connected with marketing and merchandising a bumper 1956 soybean crop and a possible even larger one in 1957 featured the 36th annual convention of the American Soybean Association held at Urbana, Ill., Aug. 14-16.

Annual meetings of the National Soybean Processors Association and the National Soybean Crop Improvement Council were held at Urbana at the same time.

The University of Illinois and the U. S. Regional Laboratory, co-hosts to the meetings, went all-out to make the occasion pleasant and effective, and its success was due in no small part to the efforts of the University-Laboratory committee.

A warning was issued by Geo. M.

In left hand column, top: A. I. Reisz, Ohio Valley Soybean Co-op, Henderson, Ky.; and Martin Sorkin, U. S. Department of Agriculture, Washington, D. C. Center: Wayne Lichty, assistant executive director, Soybean Council of America; and Paul C. Hughes, formerly field director for the American Soybean Association and now manager of Farmers Soybean Corp., Blytheville, Ark. Lower left: Capt. A. A. Clarkson, manager public Grain Elevator, New Orleans; J. L. Cartter, director U. S. Regional Soybean Laboratory, Urbana; and J. E. Barr, grain grading branch, USDA, Washington. Bottom left: ASA President Albert Dimod presents honorary life membership awards: Mrs. J. L. Cartter, Cartter, Cretter, Krs. John Gray, Gray and Dimond. The ladies received corsages. Bottom right: Chester B. Biddle, Remington, Ind.; John Sawyer, London, Ohio; Gilles DePutter, Appin, Ontario; K. A. Standing, Ontario Sova Bean Growers' Marketing Board, Chatham, Ontario; and A. E. Jolley, Chatham, Ontario.

Read from left to right on all pictures. Photos by Kent Pellett of Soybean Digest. Strayer, ASA executive vice president, in his annual report, that whether or not surpluses materialize in the coming 2 years will depend on the degree of wisdom exercised in marketing the soybean crop and its products.

"If we immediately launch a campaign of sales and promotion there is no reason why we should have surpluses of soybeans at the end of the 1956 crop year," said Strayer. "If we wait for markets to come to us, it may be a vastly different story."

One of the most impressive features of the convention was the attendance by seven representatives of the Japanese soybean industry, who were in this country to learn all they could about the U. S. soybean crop and industry. This more than anything else pointed up the serious effort of the Association and the Council to expand foreign markets for U. S. soybeans.

Albert Dimond, Lovington, Ill., soybean grower, was reelected president for the coming year.

John Sawyer, London, Ohio, producer, was elected vice president to succeed H. H. Huddleston, Lamont,

Geo. M. Strayer, Hudson, Iowa, was renamed executive vice president and secretary-treasurer.

John Butterfield, Pana, Ill., grower, was named a new director of the

1956 CONVENTION

ASA in print





Problems with Big Crop

Albert Dimond and Geo. M. Strayer reelected. John Sawyer new vice president

Association to succeed LeRoy Pike, Pontiac, Ill.

Directors who were reelected: O. H. Acom, Wardell, Mo.; Ersel Walley, Fort Wayne, Ind.; David G. Wing, Mechanicsburg, Ohio; Huddleston and Strayer.

A. E. Jolley, Chatham, Ontario, was named to the ASA board to succeed Gilles DePutter, Appin, Ontario. DePutter is now chairman of the Ontario Board.

A fair-sized group attended the field trip to the Agronomy South Farm of the UI College of Agriculture and the U. S. Regional Soybean Laboratory, and partook of the chicken barbecue lunch furnished by the Illinois soybean processors. Others visited the Northern Utilization Research Branch at Peoria, Ill., for a conducted tour of the facilities there.

An address by Dr. Frank H. Beach, professor of marketing at the University of Illinois, featured the annual convention banquet. Dr. Beach, after a string of hilarious anecdotes, led into a serious speech in which he insisted that man is at least as important as the materials, machines, methods and money that make up our industry; and that while progress in industry has been great, little has been done to "refine and improve man."

A barbershop quartet, "Four Men

of Note," entertained the banquet guests.

Ladies' events included a tea given by Mrs. M. B. Russell, wife of the head of the UI department of agronomy, a luncheon at the Urbana-Lincoln Hotel, and a bus trip to beautiful Robert Allerton Park near Monticello. III.

Processor Election

Results of the election of the National Soybean Processors Association were as follows:

R. G. Houghtlin, Chicago, was reelected president; Dwight L. Dannen, Dannen Mills, Inc., St. Joseph, Mo., reelected vice president and chairman of the executive committee; Donald B. Walker, Ralston Purina Co., St. Louis, Mo., elected secretary succeeding E. A. Cayce, also of Ralston Purina Co.; Harold Abbott, Funk Bros. Seed Co., Bloomington, Ill., reelected treasurer.

Newly elected board members were: H. R. Scroggs, Iowa Milling Co., Cedar Rapids, Iowa; Wm. King Self, Riverside Oil Mill, Marks, Miss.; M. C. Larson, Grain Processing Corp., Muscatine, Iowa; and Ralph Wells, Ralph Wells & Co., Monmouth, Ill.

Reelected directors were: Willard Lighter, Glidden Co., Chicago, Ill.; and Clark Yager, Pillsbury Mills, Clinton, Iowa.



T. Ogasawara, New York, and Mrs. Geo. M. Strayer at the annual banquet.

Committees

COMMITTEES in charge of the convention:

Convention—Geo. M. Strayer, chairman, Hudson, Iowa; Geo. Mc-Culley, vice chairman, Hudson, Iowa; Albert Dimond, Lovington, Ill.; C. G. Simcox, Assumption, Ill.; LeRoy Pike, Pontiac, Ill.; Maurice Johnson, Champaign, Ill.

Awards—Herbert H. Huddleston, chairman, Lamont, Miss.; W. L. Burlison, Urbana, Ill.; J. W. Calland, Decatur, Ind.

Nominations—Carl Simcox, chairman, Assumption, Ill.; John Gray, research agronomist, Louisiana State University, Baton Rouge, La.; Maurice Maze, MFA Cooperative Grain & Feed Co., Mexico, Mo.; Chester B. Biddle, Remington, Ind.; J. E. Johnson, Champaign, Ill.

Resolutions—John Evans, chairman, Montevideo, Minn.; Carver Brown, Laddonia, Mo.; O. H. Acom, Wardell. Mo.; Gilles DePutter, Appin, Ontario; Howard L. Roach, Plainfield, Iowa; Harold Lumsden, Essex, Mo.; David G. Wing, Mechanicsburg, Ohio; John Butterfield, Pana, Ill.; LeRoy Pike, Pontiac, Ill.; John Sawyer, London, Ohio.

University of Illinois-Soybean Laboratory Convention Committee: J. L. Cartter, chairman, director U. S. Regional Soybean Laboratory; W. L. Burlison, chairman emeritus, department of agronomy, University of Illinois; M. B. Russell, chairman, UI department of agronomy; R. T. Milner, chairman, UI department of food technology; Frank B. Lanham, chairman, UI department of agricultural engineering.

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Japan Program and Soybean Council Among Year's Accomplishments

The crop is in danger of smothering itself through underconsumption

THIS 36th annual convention of the American Soybean Association marks the end of an eventful year for our organization—one in which our Association has attempted to keep pace with the continuing expansion of soybeans, which have now become the key crop in American agriculture.

So far the utilization of soybeans, principally in our domestic economy, has kept pace with skyrocketing production. There was such a great need for the end products in our economy which the crop filled so well and so quickly and with so little fanfare that few of us actually realized what had happened. As the result of the expanding of this crop our country is self-sufficient in fats and oils. Fully as important is the high protein diet we are able to enjoy in this country because we have soybean meal to more efficiently produce livestock and poultry. The consuming public especially needs to reflect on this. Not only would protein foods be higher priced, they would just not be available.

The growing of soybeans has returned a satisfactory financial compensation as evidenced by the increasing of acres planted to the crop

1956 CONVENTION

every year. Coupled with this of course are restrictions under which our agriculture operates in the production of some other commodities, but generally financial returns have been adequate.

This crop which has come so far is now in grave danger of smothering itself, not by overproduction but by underconsumption, unless we throw off the covers and let the whole world know what it can do. Granted, our domestic market is fairly well taken care of as far as we know how to use the crop now. The United States of America, and much of this area, is in dire need of the things soybeans furnish so well and, what is fully as important, so cheaply.

Japanese Program

The American Soybean Association which, as you know, is a nonprofit organization of producers dedicated to the utilization of the crop to its fullest potential in order that its production may prove profitable, this past year entered upon an ambitious program. In addition to the usual varied activities which it has carried on, it established the Japanese-American Institute. Financed by funds available under Public Law 480 for the promotion of agricultural products in certain countries of the world, together with funds contributed by Japanese interests and the American Soybean Association, the Japanese-American Soybean Institute has made a running start toward bringing buyer and seller together in what should prove to be a mutual blessing. At this convention several prominent representatives of the soybean industry from Japan are here to observe and to talk with us about our common interest—soybeans. Talk with them. I am sure you will find we have many things in common beside this crop which originally brought us together.

The urgent need for research and promotional work on soybeans culminated recently in the forming of the Soybean Council of America. This organization, originally formed by the American Soybean Association and the National Soybean Processors Association is a device to collect and expend money in this heretofore completely neglected field. The Soybean Council of America invites all segments of the soybean industry into its organization in both advisory and executive capacities. How well this research and promotional work is done will dictate the future of soybeans.

The board of directors of the American Soybean Association solicits your suggestions and criticisms on what they have done and what they should do in the future.—Albert Dimond, president, American Soybean Association.



-Photo by Jack Everly

AT ALLERTON. Some of the convention women who made the tours to beautiful Allerton Park near Monticello, III., during the soybean meetings in August.



Two of Missouri's directors, Harold A. Lumsden, Essex; and O. H. Acom, Wardell, with President Albert Dimond.



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Report of the Executive Vice President and Secretary-Treasurer . . . Geo. M. Strayer

Calls For Aggressive Sales Campaign

There is need for every bushel of the U. S. crop but markets won't come to us

THE DEPARTMENT of Agriculture crop estimate of soybeans was issued Aug. 10. It indicates a 1956 soybean crop of 443 million bushels. If that materializes it will mean slightly over 70 million bushels more soybeans than were produced in 1955.

The soybean industry of the United States is faced with the possibility of actual surpluses for the coming year. Whether or not those surpluses materialize will be dependent on the degree of wisdom which we exercise in marketing the soybean crop and in marketing the products from it. There is need in the world for this quantity of soybeans and for additional supplies. If we will immediately launch a campaign of sales and promotion there is no reason why we should have surpluses of soybeans at the end of the 1956 crop year. If we wait for markets to come to us it may be a vastly different

Let us recognize at the outset that practically every year since 1946 there has been flurry of excitement during the month of August, when the first bushelage report came out, and that there have been many people who were greatly concerned that surpluses of soybeans were going to build up. Each year we have been

ASA in print

able to find a place for those supplies of soybeans, and each year we have had the supplies depleted by the time the new crop movement began. If we plan intelligently we may have the same situation at the end of this crop year.

The 1955-56 fiscal year of the American Soybean Association has been a particularly interesting one. One of the significant developments was the announcement by USDA that the support price on 1956-crop soybeans was going to be raised from a \$2.04 national average which applied in 1955 to a \$2.15 national average on the 1956 crop. This increase in the support price was announced over the protests of representatives of this Association, and over the protests of the men who felt they knew the reaction which would take place.

As a result of the acreage control measures invoked on other crops, and of the increase in the support price, coupled with the very favorable selling price on soybeans during the planting season, the soybean acreage in 1956 has been by far the largest in history.

Weather conditions throughout most of the soybean production area have been favorable, and the Aug. 10 crop report indicated an average yield of 21.1 bushels per acre. So far during the month of August the weather has been favorable throughout most of the production

area, and it seems very likely that we will not see the shrinkage in the September report which was true last year and which some folks had forecast for the current crop year.

To me it becomes increasingly apparent that we have now reached the place where we cannot continue to increase soybean production each year in huge jumps without jeopardizing our entire industry. Perhaps we must consider measures for 1957 which have not been practical up to this time. While there are expanding markets for soybeans and soybean products in other areas of the world, and while there are expanding markets for sovbean oil meal here at home, even in sovbeans it is not possible to keep expanding production indefinitely without countering market difficulties.

As this is written I do not have knowledge of any announcements which Mr. Marvin McLain is going to make on our Tuesday morning program. However, as I understand the soil bank program as announced at the present time, there is good probability that rather free planting of soybeans will be allowed in 1957. If this is true we may have another large increase in 1957 soybean acreage, and as a result find ourselves in very serious marketing trouble. I suggest that your board of directors should look carefully at the 1957 program plans, and make sure that the heavy shift from other



Left, at head table of annual banquet: W. L. Burlison, head UI department of agronomy emeritus; J. W. Calland, Soybean Crop Improvement Council; R. G. Houghtlin, president, National Soybean Processors Association; Mrs. Dwight L. Dannen; ASA President Albert Dimond; Dr. Frank H. Beach, UI professor of marketing and banquet speaker; and Mrs. Dimond. Right, "Four Men of Note," barbershop quartet at the banquet.

. . "We cannot continue to increase production in huge jumps"

crops into soybeans is not going to be continued without restriction.

We have now had almost one year's experience in trading in soybeans on the basis of the new standards which went into effect on last Sept. 1. Last year the announcement of the change in the standards had been made, but we had no experience. In most respects the operations under the new grading standards have been very successful. Foreign buyers tell me that the foreign material content on soybeans received by them after the standards change was made on Sept. 1 has been much lower than was true previously. In fact, Japanese buyers tell that the foreign material content has been running approximately onehalf of that which previously ex-

Change Desirable

It is my feeling that the overall acceptance of the change in the standards has been very good, and that the change was a very desirable one. There is no question but that the 1955 soybean crop moved to market on a cleaner basis than any crop in history. When there is incentive to do so farmers can produce a good quality soybean crop relatively free of foreign material. So long as we operated on the previous standards there was no incentive to do so.

We do have one serious problem which must still be solved. It is my hope that your resolutions committee is presenting a resolution on it, and that this meeting will take favorable action. I refer to the current classification of broken particles of soybeans as foreign material. Broken particles of soybeans which pass through the 8/64-inch round-hale screen are, according to our standards, foreign material. They are actually not foreign material. They produce soybean oil and soybean

oil meal. They are incorrectly classified when they are shown in our grading standards as foreign material, and we must insist that the U.S. Department of Agriculture grain grading branch give serious consideration to finding a practical method of eliminating broken particles of soybeans from consideration as foreign material.

As I have traveled in Japan and also in the European countries I found that we are the only country in the world which classifies broken particles of soybeans as FM. In other countries they are classified as unsound soybeans, split soybeans or some similar classification. However, so long as we class these broken particles as FM our buyers will continue to do so, and we place ourselves at a disadvantage.

We must recognize that every time a certain lot of soybeans is handled through elevators into cars, barges, trucks, lighters and ships more soybeans are broken. Foreign buyers admit that we are giving them a considerable advantage under our present standards. Trading in soybeans would be much simpler both on a domestic and export basis, if proper foreign material classification included only that material which is truly foreign, and not those pieces of soybeans that have suffered mechanical breakage. It is my understanding that this change in the classification of broken particles of soybeans could be made by the grain grading branch without further public hearings, since the matter was considered at the hearings one year ago. I do feel that this problem is so serious we must give consideration to solving it immediately.

Today you will hear considerable about the formation and operation of the Soybean Council of America. We have talked about such an organization for a period of years. I have editorialized on the need for



Mrs. Geo. McCulley, wife of ASA's business manager; and Siert Riepma, president of the National Association of Margarine Manufacturers.



USDA's Herbert W. Johnson, Beltsville; and Floyd I. Collins, U. S. Regional Soybean Laboratory.



Mrs. Harold Lumsden, Essex, Mo., and the Soybean Digest's Del Cobie.

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such an organization for a long period of time. Our sovbean industry has been most fortunate in that we have not been faced with some of the problems of other agricultural industries. With the 1956 crop it appears we are faced with some of the same problems. We must make every effort to see that the Soybean Council of America becomes operative at the first available date, so that funds may be collected to do some of the jobs which are so important and which will mean the difference between favorable prices and unfavorable prices on soybeans.

We must recognize that no longer is there someone waiting at the door eager to take away the meal and the oil produced from our soybeans. We must begin to do as many other industries have done - merchandise, sell and service our products. For a period of 2 years a joint committee from this Association and from the National Soybean Processors Association has been meeting on this subject, and you have already seen the announcement of plans for the organization. I am very hopeful that the organization is going to get off the ground promptly, and that it will succeed with the full cooperation of processors, handlers, and producers of sovbeans.

I sincerely hope that our industry is wise enough to make preparations for solving its problems before we are forced into areas of distress as some other agricultural industries have been. When you have surpluses they depress prices and you start a whole series of events which are unfavorable. We must make the Soybean Council of America work from the outset, and we must make absolutely sure that the objectives are obtained with a minimum of expenditure and a maximum of effec-

For a series of years now the American Soybean Association has found itself in a position of having an appetite which is bigger than its income. There have been so many things which needed doing, and there has not been income to the Association commensurate with those demands. To the average soybean producer of the United States all those things which have happened in the soybean industry have happened because of the soybean crop, and not because men spent time, effort, sweat and toil in making those things happen. The average producer, I am afraid, does not recognize that this Association has had something to do with the prices which he has received for soybeans through the last several years. Because of that situation we are in an unfortunate financial position.

Revenue Down

Revenue from advertising in both the Soybean Digest and Soybean Blue Book during the 1955-56 fiscal year was down from the previous year, reflecting the general decrease in trade magazine advertising. At the same time there was no expansion in the soybean processing industry, low margins existed in the industry, and the industry as such was just not buying. During the past year that situation has changed slightly, and prospects for advertising during the coming year do look more favorable. However, we are still far below previous levels of income from advertising and thus we have not had the revenue from such sources with which to work.

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Sales of memberships and subscriptions to the Soybean Digest have been maintained at a favorable rate. During the previous year the paid subscription list had reached the highest level since the Soybean Digest was started in 1940. That trend has continued. The Soybean Blue Book of 1956 was the same size as that of the previous year, carrying about the same amount of advertising. Late News, our periodic newsletter issued 32 times per year, has continued to show progress, and income from subscription sales are approximately the same as those of the previous year.

However, balanced against this is a continuing rise in expenses. In spite of everything we could do to hold cost to a minimum we were not able to represent the soybean growers of the United States as they should be represented and still stay within our income. After making the allowances for depreciation on equipment and materials owned by the Association, after making allowance for a decrease in inventory, the net worth of the Association, according to our certified public accountant's audit, is \$4,282.91 less than a year ago. We cannot continue to operate on this basis. At the same .time I do not want to give the impression that we are completely broke, for we have cash in the bank and we had accounts receivable, with only one unpaid bill as of July 31. I do hope, however, that as the Soybean Council of America gets into operation it can assume some of the responsibilities which have been assumed by the American Soybean Association and will relieve us of the costs involved. I am also hopeful that contract can be made between the two organizations wherein ASA will do certain jobs for the Soybean Council and be reimbursed for them.

This is my 16th report to you as your secretary. Much progress has been made in those 16 years. During my acquaintanceship with the organization I have seen soybean oil meal sell at \$17 per ton, and I have seen it sell as high as \$120 per ton. I have seen soybean oil sell as low as 2¢ per pound, and I have seen it in the high twenties. I can recall soybeans selling at 70c per bushel, and I have seen \$4 soybeans.

Probably no one commodity produced in quantity on American farms is traded so extensively, and is offered such opportunities for speculation. I think it is time we give serious consideration to the desirability of such speculation. I think we would all agree that the producer of soybeans would be ahead if we could have a rather steady price level maintained throughout the year, rather than the violent fluctuations which take place in soybean prices. I think we should be aiming toward that goal, and I think we should give

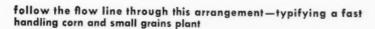


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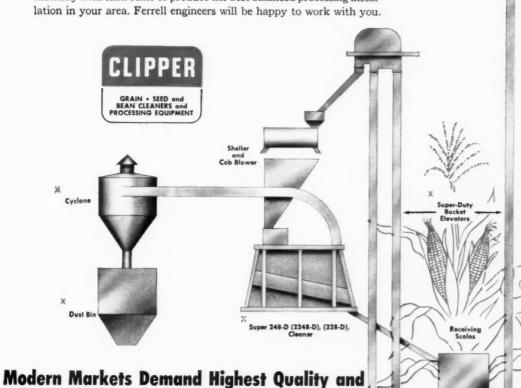
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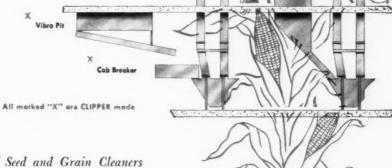


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Saihei Toriumi and Goro Kawamura of Tokyo and Mrs. Ersel Walley of Fort Wayne, Ind., at the annual banquet.

serious consideration as to how we may best achieve it.

During the past year new opportunities for market development work on soybeans have been opened up to the American Soybean Association. In this program you have heard descriptions of the things which have been done in Japan. You are honored to have seven representatives of the Japanese soybean industry here today. They are going to study the soybean industry of the United States, and it is our hope that they will go back to Japan better qualified to buy American soybeans for their industries.

Consideration is being given to a similar type of program in the European countries. It means that manpower must be mobilized, trained, and made available for the management and operation of such work. It is an opportunity to use Public Law 480 funds to do the market expansion and promotional work which our industry should do for itself. Never again will such opportunities be likely to be offered to us, and we must take advantage of them to the greatest possible extent.

This has, in many ways, been a very successful year. In bringing it to a close I want to pay tribute to those men who have served as officers and directors of the American Soybean Association. I want to say again that no place in my experience in working with organizations have I ever found a group of men who were so willing to spend their time and effort in behalf of an organization, without thought of repayment. Your president, Albert Dimond, has contributed much time and money to further your interests. He has neglected his own farming operations in order that he might do so. Each member of the American Soybean Association owes him a debt of gratitude for the work which he has done in your behalf.

The committee which has met repeatedly with representatives of the processors in the formation of the Soybean Council of America should be sincerely congratulated and thanked. Howard Roach, Dave Wing,

John Sawyer, Jake Hartz, Chet Biddle, Albert Dimond, and others have contributed much toward the progress which has been made. It is my hope they will see realization of their dreams on this thing, and that the rewards will come to them as they see the organization progress.

To all the members of the board of directors who have served on committees throughout the year, who have taken their time to attend board meetings, and who have made trips to Washington and have done other foot work for the Association. we also owe a debt of gratitude. Unless you have, at one time or another, served on the board of directors of the American Soybean Association you have no conception of the amount of time and effort which is required. These men serve you well, and they should have your sincere thanks for having done so dur-

ing the past year.

To Kent Pellett, George McCulley, Del Cobie and the other members of the office staff who have made the accomplishments of the year possible I also want to extend, in this manner, my most sincere thanks. Their cooperation is appreciated. To all other persons who have in one way or another contributed to the work of the Association during the past year, and whose names I may have omitted, I also want to extend my personal thanks. We trust that the year has been one of which you can be proud, and I sincerely hope that as we gather for the 1957 convention a year from now we will have our industry organizational structure completed and will have the things which a billion-dollar industry should have. - Geo. M. Strayer, executive vice president and secretary-treasurer, American Soybean Association.

Seed Cleaning Boon

A method of seed cleaning, known as electrostatic separation, may well prove a boon to the seed cleaning industry, Dean E. Booster, of Oregon State College, a speaker at the annual meeting of the American Society of Agricultural Engineers at

Roanoke, Va., said. Booster explained that electrostatic separation is made on the basis of the differences in the electrical properties of the seeds. It has been used successfully to remove leaf and stem material from raisins, insect and animal excreta from corn and mustard seed, water cress from rice, wild garlic from vetch, and ergot from bentgrass

Conventional seed cleaning equipment makes separations on the basis of differences in size, shape, weight, or surface texture of the seeds. Since the electrostatic separator does not depend on these differences, it offers a way of making separations that are impossible or impractical with conventional cleaning equipment, Booster said.

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Columbian Bolted Steel Tanks are ideal for storage of large and small grains, rice, beans, cotton seed meal, peas...and because of tightness, widely used for storing dehydrated alfalfa under inert gas pressure. The versatility available in sizes and heights, the ease of construction and the quick expansion of capacity by adding completely matching tanks at any time, are reasons why Columbian's "New Look" is today's fashion in Country Elevators.

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John W. Evans, chairman of the resolutions committee.

RESOLUTIONS

Approve P. L. 480 . . . Back Soybean Council of America . . . Ask elimination of broken beans from f. m. . . . Suggest separate USDA division for oilseeds

RE IT RESOLVED by the annual convention of the American Soybean Association, assembled Aug. 13-16 at the Illini Union on the University of Illinois campus, Urbana,

We express our thanks to the many speakers, governmental and private, who have contributed their time and talent in appearing on our program and all committees who have cooperated so well in preparing the program and making necessary arrangements for the conven-

International Relationship. We hail the appearance of these distinguished business leaders from Japan with great pleasure. The visit should do much to create better trade relations and better understanding between our two great countries. Their keen interest in American methods of production, marketing, processing and utilization of American soybeans will do much to clarify any difficulties that have emerged in our trade relations in the past.

We compliment George Strayer, Ersel Walley, Marion Hartz and others for their part in developing the exhibit and promotion thereof for American soybeans at the Osaka Trade Fair this past spring. We urge means be provided for more displays of our American soybeans in Japan and in other places of the world where a need for American soybeans and soybean products exist

We approve the plan of Public Law 480 and urge adoption of an adequate budget for further developments as with increasing acreage of soybeans in the United States we must hold our present markets in various European countries and encourage increased outlets in Japan, Spain, Italy, Tunisia, India and South America.

Domestic. We unanimously commend the establishment of the Soybean Council of America and accept our responsibilities in its organization and financing. This can result in more and better merchandising

of our American soybeans and soybean products in both domestic and foreign markets.

Grain grading practices as such should reflect the true value of grains sold by the producer in order that a producer of quality soybeans may be properly compensated.

We must continue to work for better trade practices that will improve our American standing in foreign markets.

We recommend the grain grading branch of the USDA develop a practical means of separation of broken particles of beans from true foreign material and that federal grain standards be so amended as to classify broken particles of soybeans that go through 8/64-inch screen as split or broken soybeans and not as foreign material.

Due to the importance of oilseeds, oils and fats as farm produced commodities in our business economy and our human and animal diets we recommend consideration be given to consolidate oilseeds, oils and fats in a separate division within the Commodity Stabilization Service at the earliest convenience.

Research. We recommend that all research efforts be continued but that increased emphasis be given to research in utilization and market-

We recommend that a study be continued of the proportionate representation of the various states on the board of directors of the American Soybean Association.-John W. Evans, Minnesota, chairman; Carver Brown, Missouri; O. H. Acom, Missouri; Gilles DePutter, Ontario, Canada; Howard L. Roach, Iowa; Harold Lumsden, Missouri; David G. Wing, Ohio; John Butterfield, Illinois; Le-Roy Pike, Illinois; John Sawyer, Ohio.

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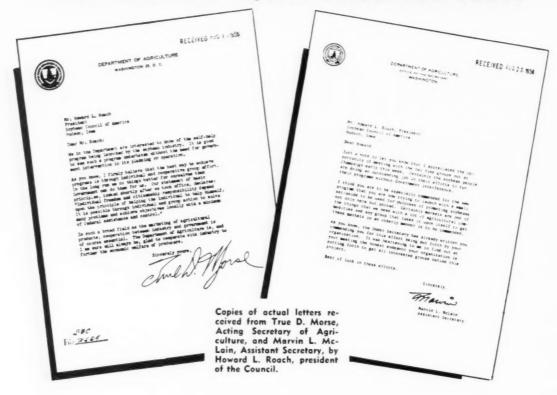
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Endorsements for Soybean Council from USDA



European Export Program the First Undertaking of Soybean Council!

A HUGE export market development program in European countries to be implemented with over one-half million dollars in P. L. 480 and soybean industry funds will be the first undertaking of the new Soybean Council of America.

The Council is an industrywide organization formed this past summer for the purpose of research, education and promotion of the nation's sovbean crop.

An agreement between the U. S. Department of Agriculture's Foreign Agricultural Service and the Coun-

cil to implement the program was approved by the Council's board of directors and signed by the officers. It was submitted to and signed by FAS Aug. 22. The program will be similar to the soybean market development program already in effect in Japan under the sponsorship of the American Soybean Association and Japanese trade groups.

The European export program will include Italy, Spain, Germany, Austria, France, Finland and possibly other countries. It will in general follow the recommendations of Geo. M. Strayer, executive director of the Council, to USDA on his recent return from Europe. Strayer, who saw possible unwieldy surpluses developing from the 1956 and 1957

soybean crops, believes there is a potential increase of 60 to 70% in European markets for soybeans and soybean products over a period of years.

A European office will be set up, and the Soybean Council will carry out projects in research, market analysis, sales promotion and related trading activities for soybeans, soybean oil and other soybean products in the above named European countries.

The program will be financed by: \$500,000 in foreign countries made available by FAS.

\$25,000 advanced by the Soybean Council.

Funds advanced by European trade groups.

ASA in print

The program is thus a massive attack by the Council on the threat of soybean surpluses during the next 2 crop years.

The overall program of the Council, of which the European export project is a first step, will be financed by voluntary contributions from soybean producers at the point of sale. The operation will be simple. The collection of 10c per 100 bushels (\$1.50 per carlot of 1,500 bushels) will be made by the buyer at the time of purchase. And soybean processing plants will deduct \$1.50 per carlot on soybeans coming into their plants. The proceeds will be turned over to the Soybean Council of America. That is all there is to it.

The checkoff will begin with the 1956-crop movement as originally planned.

First report on the Council was made by its officers during the American Soybean Association convention at Urbana.

Said President Howard L. Roach: "The question has been asked, 'Why aren't the grain men represented on the Council?'

"We had to make a start somewhere. For the producer and processor associations to set up the Coun-



BOARD OF DIRECTORS of the Soybean Council of America. Left to right, R. G. Houghtlin, secretary, Chicago; Geo. M. Strayer, executive director, Hudson, lowa; Scott Cramer, Chicago; Dwight Dannen, St. Joseph, Mo.; Albert Dimond, treasurer, Lovington, III; Dave Wing, vice president, Mechanicsburg, Ohio; Chester B. Biddle, Remington Ind.; Howard L. Roach, president, Plainfield, Iowa; Jake Hartz, Jr., Stuttgart, Ark.; John W. Evans, Montevideo, Minn.; Wayne Lichty, assistant executive director, Hudson, Iowa; Ralph G. Golseth, Danville, III.: and John Sawyer. London, Ohio.

cil seemed to be the most practical method of getting it started. That was what was done.

"Grain handlers will be brought into the Council as soon as they wish, and as soon as they have representation able to speak for them as a group."

On the Cover

In the lower lefthand picture on the front cover Treasurer Albert Dimond, Secretary R. G. Houghtlin and President Howard L. Roach give their first report on the Soybean Council of America at the ASA convention.



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Soybeans in U.S. Department of **Agriculture Marketing Programs**

By MARVIN L. McLAIN Assistant Secretary of Agriculture

Government programs will be used to fullest practical extent to move available supplies

THIS is a time of great challenge for agriculture generally. Adverse situations have built up in recent years, partly as a result of past program operations.

Your main interest, of course, lies with the overall fats and oils situation - and more particularly with soybeans and their processing and marketing.

Soybeans have not been in as much trouble as some of the other leading commodities, but differences are largely a matter of degree. The same principles apply pretty much across the board. And what happens to corn or cotton, for example, has an inevitable effect on soybean developments.

I have personally watched the development of agricultural problems for more than 25 years—at all levels from the producer to the consumer, and including the part played by government. But I do not come close to having all the answers. I doubt if anybody does. It is going to take a lot of hard work and clear thinking to come up with the right solution for some of the difficulties which still loom large. It has never been more important to understand the fundamental principles involved, and to keep our eyes focused on the real issues.

Agriculture has not been sharing equally in the abundant peacetime prosperity which is being enjoyed by the rest of the economy.

This Administration is fully and sympathetically aware of this fact. It is determined to do every sound thing possible to increase farm income. The farmer deserves a better break, and a sound and prosperous agriculture is important in the total economy. At the same time, however, it is equally determined to seek improvement in constructive ways, and not through the adoption of unsound measures which would simply build more trouble for the

CONVENTION in print

In this connection, I am sure members of this Association will agree that in the final analysis the soundest solutions for economic problems are those which are developed and carried out by industry itself. This is the way to operate under our dynamic free enterprise system. As a partner, the government can and should do everything it can to help, but it should never be the dominant

Surpluses, of course, are at the heart of our present situation. We simply have too much of many leading crops. These heavy supplies bear down on the price structure; they force drastic production adjustments, which work against efficient farm management; they cost the government hundreds of millions of dollars. And because such a large proportion of some surpluses find their way into the hands of government, the normal marketing machinery can be bypassed and weak-

Surpluses Built up

Let's take a quick look at what has happened to carryover stocksthe unused supplies from former production before new crops are harvested-for some of our leading

The cotton carryover got down to relatively low levels right after Korea. It was 2.8 million bales in 1952. Then the climb started: to 5.6 million bales in 1953; to 9.7 million in 1954; to 11.2 million in 1955; and to an estimated 14.6 million bales the first of this month.

For wheat, the story is: 256 million bushels in 1952; 562 million in 1953; 902 million in 1954; 1 billion 20 million in 1955; and about 1 billion 30 million this last July 1.

Corn shows a similar buildup. The carryover in 1952 was 487 million bushels; in 1953, 769 million; in 1954, 920 million: in 1955, 1 billion 24 million; and an estimated 1 billion 200 million bushels this coming Oct. 1, before the 1956 crop is harvested.

There are other heavy holdings, including an alltime record of total feed grains, but these will illustrate what has happened.

The surplus situation is further complicated by the fact that a very large part of the stocks are under Commodity Credit Corp. control. As of June 1, the latest official fiscal report, CCC had \$8 billion 500 million invested in price support inventory and loan holdings. Of this total, \$6.1 billion represented inventories -already taken over and owned outright by the Corporation. The other \$2.4 billion was advanced on non-recourse loans.

The inventory and loan figures do not tell the whole story of the price support situation. In addition, another \$3 billion of CCC borrowing authority was tied up in net realized losses not yet reimbursed, other accounts receivable, investment in storage facilities, and other commitments. The situation was getting so tight that Congress increased the Commodity Credit Corp.'s borrowing authority to \$141/2 billion.

I am sure you are familiar in general with the story of how these surpluses were built up. In the first place, the production potential was there. Our farmers are much more efficient now than they were even a few years ago. With modern equipment, adapted seeds, and better fertilizer and insecticides, they can turn out about a third more on the same acreage. The result is that they have the ability to produce more than the market will take at fair prices in any normal peacetime year.

World agricultural production, down sharply during the war years, has increased steadily now that we have peace. As a result, other countries are doing more to meet their own food and fiber needs. There is less demand, worldwide, for most of

our stocks.

Our own production was geared to high levels during World War II and the Korean conflict. Prices were good. In fact, they were generally above the price support levels. OPA, while it was still in effect, had a lot more to do with price levels than did the nominal price supports.

When the emergency was over,

.. "Soil bank will not mean lessening of other efforts"

and demand began to fall off, we made the mistake of keeping right on with high-level price supports. This stimulated efforts on the part of farmers to produce all they could.

Another factor contributing to the rapid buildup of surpluses in this period was the fact that the government did not use the production controls which were authorized in the law. Acreage allotments on important basic crops were not ordered until 1953—to take effect with 1954 production. And as a matter of fact, these controls have not been too effective since they have been in use. Big increases in yields have offset much of the adjustment effect of allotments, even when they have been observed.

The inevitable result of these influences was the development of the surpluses which are now causing so much trouble. And the Commodity Credit Corp., with its price support commitments, became the principal outlet for many of our leading agricultural commodities. I need not emphasize the serious effect of this on our normal marketing system.

There has been no lack of effort in trying to dispose of these surplus holdings. The record shows that from July 1, 1953, through June of this year, commodities costing nearly \$6 billion were moved out of CCC inventory. Without this disposal, CCC inventory holdings today would approach \$12 billion in cost value, instead of the \$6 billion now on hand.

These surpluses were built up over a period of several years. Obviously it is going to take some time to get rid of them. A \$6 billion inventory does not disappear overnight.

The Agricultural Act of 1954 recognized one of the basic problems—the overproduction incentive of frozen, high-level price supports. It restored the principle of flexible supports, adjusted realistically in line with the current supply situation. But the authorized adjustments could not take effect until 1955 production, and then only gradually.

In the meantime, gigantic surpluses still stood out as the chief trouble spot. No programs—no matter how sound in principle — could operate effectively while excessive supplies were bearing down on the agricultural economy.

Soil Bank

That's the background against which the new soil bank plan was developed. The need was for a direct and frontal attack on the surplus problem. The soil bank provides this approach.

The first objective of the soil bank is to give farmers a means and an incentive to reduce production be-

low the levels of recent years—as an emergency measure made necessary by the accumulated surpluses. The second—and longer-range objective—is to build and maintain fertility on the "reserved acres," as a backlog for the future.

The initiation of the soil bank will not mean any lessening of our other efforts to help agriculture. Price stabilization activities will continue. There will be increased operations in direct purchase of perishable commodities where needed. Special programs, like the school milk plan, are being continued and expanded. We will continue to seek the widest market outlets, both at home and abroad. Basic research is being expanded. In short, we will continue to use every tool at our command to take sound action to improve the position of agriculture.

Soybeans have not faced the problems which have developed for many other commodities. Carryover stocks have not been excessive, and Commodity Credit Corp. holdings are negligible. This reflects effective distribution and marketing.

As you know, U. S. soybean production has increased steadily and rapidly. From only 193 million bushels in 1945, our production reached 371 million bushels in 1956—and reports indicate that 1956 acreage is up about 12% from last year's level.

Fortunately, markets have expanded fast enough to handle most of this big production increase. This expansion, coupled with deficits in production of sunflower seed in Argentina and olives in the Mediterranean Basin, has made it possible to

market our large crops for the past 2 years, along with the surplus of cottonseed oil accumulated from 1951-53 crop operations.

The record shows, however, that CCC has never had to take over any considerable percentage of a year's production. As much as 41 million bushels have been placed under price supports in a single year, but relatively few of these stocks have been delivered to the Corporation. For example, more than 30 million bushels from the 1955 crop were placed under price support, but only 14,000 bushels were taken over by CCC.

Your Association deserves a great deal of credit for helping to get the facts to farmers about the market situation—and urging them to redeem their soybeans before CCC had to take over. The statistics show that your advice was accepted by a great majority of producers.

Since 1950, price support levels for soybeans have ranged from a high of \$2.56 a bushel in 1952 and 1953, to \$2.04 in 1955. During this period, prices received by farmers have been substantially above the support levels.

In connection with this matter of prices and price support levels, I want to express a word of appreciation for the constructive attitude taken by soybean producers and their representatives with regard to possible increases in price supports. They did not urge that supports be raised. They were very conscious of the fact that they should look for their best returns in the free market, and that price supports should not be

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Exports are, of course, of primary importance for the soybean industry. Twenty years ago, the United States produced only about 20% of all the soybeans produced in the world. Today, the production is close to 50% even though world production last year reached a new record.

Fortunately, world demand has been strong. There is growing evidence of expanding world need and demand for fats and oils and oilseeds. There is also evidence that, with competitive prices and good merchandising, the United States will be able to hold and expand its markets in this field.

First emphasis, as in all exports, is on sales for dollars in moving soybean and other fats and oils products. At the same time, government programs will be used to the fullest practical extent to encourage exports at a high enough level to move supplies which are available. It is currently estimated that during the crop year ending Sept. 30, soybean oil exports will total 500 million pounds or more. Of this total, more than 200 million pounds will probably be oil purchased under Title I of Public Law 480—through programs authorizing payment in the

currency of the importing country.

Looking ahead, prospects are favorable for export movement in the year which begins Oct. 1. However, with some apparent improvement in production prospects in other areas of the world and anticipated large production in the U. S., this year may prove to be something of a test. Skill may be needed in handling and marketing the crop. Continued stimulus of Public Law 480 program operations to facilitate exports and increase consumption in various countries may be needed. Funds were increased under Public Law 480 by act of the recent Congress from the original \$1.5 billion to \$3 billion.

The outlook for the soybean industry seems to be good. At the same time, I am sure members of your Association are among those who realize that this is not necessarily a guarantee for the years ahead. The same influences which have gotten other major crops into trouble could affect soybeans, if unwise policies were followed.

You know the need to continue working toward ever-increasing efficiency, and to watch your production and marketing trends carefully. The soybean industry has come a long way in the last 20 years. With sound planning, it can continue this advance in the future.

Year's Exports up

EXPORTS of vegetable oils and oilseeds were up one-third for the fiscal year 1955-56 ending June 30 as compared with 1954-55, reports the U. S. Department of Agriculture.

Total was an estimated \$400 million in 1955-56 compared with \$300 million in 1954-55.

This last year's performance was the outcome of improved economic activity and rising demand abroad, competitive U. S. prices, export programs, and smaller supplies of oil olives and certain foreign competitive oilseeds.

Soybean exports are estimated at 69 million bushels in fiscal year 1955-56 based on shipments through May and USDA inspections in June. The total was 37% above 1954-55.

Factors in last year's gain were the fact that CCC cottonseed oil supplies were sold or committed, dependable U. S. deliveries, the need for byproduct cake and meal for feed abroad, and the need to use foreign oil mill capacity.

The combined exports of soybean and cottonseed oils set a 1-billion-pound record, according to USDA. This is more than 50% larger than the 660 million pounds exported in 1954-55.

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Japan: Soybean Gateway to the Orient

By ERSEL WALLEY

Past President and Director of the American Soybean Association, Fort Wayne, Ind

Twin problems of foreign material and green color are still the chief ones facing us in the Japanese markets Walley says we can develop markets at home and abroad for a billion bushels of soybeans

OUR REFERENCE here to Japan as the "Gateway to the Orient" is not based primarily upon her geological location. It is based on the outstanding intelligence, aggressiveness, and willingness of the Japanese people to work.

Soybeans were centuries old in Japan before they were even known in the United States. It is well established that tofu and perhaps other soya products have been used for food in Japan for over 400 years. We have before us the record of one soya sauce factory which is over 100 years old, and commercial oil extraction was established in Japan near the beginning of this century. The fact that Japan has for centuries supplemented their rice diet, rich in starch, with the essential proteins, fats, and minerals of soybeans may bear causal relation to the unusual energy of the Japanese people.

In the early 1956 issues of the Soybean Digest, George Strayer has given us excellent reviews of the place of soybeans in the Japanese economy emphasizing in conclusion, "In Japan, soybeans are food!" Historically, the soybeans used in Japan came from their own limited production and imports mostly from Manchuria. Since the war and with the communistic domination of China, Japan has looked to us for its source of outside supplies. It is the object of our present efforts that she may continue to do so.

At this point we should pause to dispose of a statement which we hear all too often. This statement is to the effect that the Japanese market for American soybeans is only temporary and that eventually Manchuria will recapture this trade. Such statements overlook the fact that inside the communistic orbit, there is not only a serious shortage of food but nutritional problems which require the use of greater and greater quantities of soybeans for food at home. Involved is the false assumption that in quality of product, price, business

1956 CONVENTION

ASA in print

integrity, and service, we cannot meet the competition of the Chinese Reds. The statement is so wrong that the Japanese soybean industries would indeed today have a very dim future if they were dependent entirely on the China Reds for their needed supplies of soybeans and soybean products. To me, it is an inescapable conclusion that changed world conditions have created for the Japanese and American soybean industries mutual problems and opportunities.

The soybean exhibit at Osaka was an excellent example of what can be accomplished by working together. Certainly, it was the most complete exhibit of soybeans and soybean products ever assembled at any one place at any one time. It would be impossible to properly express our gratitude to all the American soybean growers, processors, food manufacturers, and equipment manufacturers who sent products and literature to be used in this exhibit. Likewise, it is difficult to adequately express our appreciation to the Japanese soybean and food industries for their fine contributions.

The Japanese did, however, have the advantage of witnessing the exhibit and getting a particular thrill out of their part, therein. The effectiveness of the exhibit came from the captions explaining to the Japanese people the value of soybean products to their health and prosperity. The story of this exhibit in the June Soybean Digest and the pictures shown here at the convention deserve your attention.

Certainly the exhibit at Osaka formed a perfect background and experience for completing the formation of the Japanese-American Institute. The Japanese members are the oil and fat manufacturers, miso, tofu, shoyu, and the soybean and fat and oil importer-exporter associations. The American member is the American Soybean Association.

The Institute was set up with a minimum of formality with each organization having equal representation. Shizuka Hayashi was engaged as managing director. Mr. Hayashi enjoys unusual respect and prestige throughout the entire Japanese soybean industry. He speaks and writes English excellently, and his availability and acceptance of the position is most fortunate.

Quality Better

In writing the program of market development to be carried out by the Japanese-American Institute, we went much further than had been previously anticipated. The previous work of Messrs. Strayer and Kurtz



OFFICIAL visitation team of the Japanese-American Soybean Institute and Ersel Walley, who helped set up the Institute. Left to right, Matsuoka, Sakaguchi, Walley, Abe, Kawamura, Toriumi.

had centered upon the question of the quality of American soybeans. As a result of the lowering of the percent of foreign material allowable in U. S. No. 2 soybeans and the fine work of these gentlemen, it was indicated that somewhat less stress need be placed on the matter of the the quality of American soybeans. ing in Japan.

The problem of foreign material and color of American beans meeting the needs of the Japanese market is not solved by any manner or means. The prime efforts of the Institute will be devoted to handling complaints, making investigations, and sending full reports to the American Soybean Association. Complete studies will be made along lines suggested by Strayer and Kurtz. The technical research section of the Japanese-American Soybean Institute has a well outlined program of making a study of the quality at origin, effects of the methods of handling, and the destination condition of soybeans received by users in Japan. This investigation is to apply not only to soybeans of American origin but to those from other countries as well.

Reports will be made to indicate the exact requirements, needs, and desires of Japanese food manufacturers not only as to soybeans, but also as to processed soybean products. It is difficult for us here in the United States to realize the extent of the uses of soybeans in Japan as an essential part of their diet.

As a direct result of the exhibit at Osaka, we were prompted and encouraged to set up an education and promotion section of the Institute. Detailed objectives and suggested activities were outlined for this section as part of the work to be carried out in this project. Studies are to be made of methods of distribution, advertising, and selling in Japan of products made from soybeans.

We are here seeking opportunities of unknown potentiality. We do know that Japan has limited land resources-rice will continue to provide the most sustenance and highest utilization of the greater portion of their cultivatable lands. Perforce, Japan must depend on industry for its livelihood and in those endeavors. it is literally "bursting at the seams." Such an intelligent and hard working people should and will be able to provide themselves higher standards of living including food. In such an expanding economy, they, like people everywhere else, will give preference to what they most desire, and it may be the golden opportunity of both the Japanese and American sovbean industries to encourage the Japanese people to desire more and more soybean products.

To forestall any misunderstanding, it should be explained that our friends in the Japanese soybean trade groups are making a real investment in this project-not only in money but in countless hours of valuable service and attendance on the interest of the Institute. It is a unique privilege and pleasure that we have with us at this convention representatives of the Japanese members of the organization. As you make their acquaintance, you will discover their seriousness of purpose and their importance in the business life of Japan. In my asso-

ciation with them, a haunting question continued to run through my mind, namely, "How can I earn for the American soybean industry and for myself some degree of the respect which I have already gained for them?" Accordingly, may I ven-ture the opinion that there is so much to be accomplished of mutual benefit to all Japanese and American soybean interests, that the work of the Institute should be carried on continuously; and the office of the Institute in Tokyo should remain the outstanding center of exchange of technical and market information available to every grower and user of soybeans either Japanese or American.

The opportunities in the Far East outside of Japan are unlimited. Soybeans are definitely the most economical source of edible proteins, fats, and minerals. This potential market can be developed only by those who have the know-how, the facilities, and the aggressiveness necessary to do the job.

I do not believe I am dreaming when I say that a domestic and foreign market can be developed for a billion bushels of American soybeans a year. Neither am I dreaming when I refer to Japan as, "The Soybean Gateway to the Orient!"

Japanese Visitation Team Tours U. S.

A DELEGATION of eight representatives of Japanese soybean industries, five of them members of the official visitation team of the Japanese-American Soybean Institute, attended the convention of the American Soybean Association at Urbana, Ill., Aug. 14-16, and late in August toured the soybean growing and processing areas of the United States

Purpose of the visit was for the group to spend some time in discussion with U.S. trade groups and in firsthand observation of U.S. practices in harvesting, storing, shipping, sampling and grading soybeans.

Points visited included the U.S. Regional Soybean Laboratory at Urbana; the Northern Utilization Research Branch at Peoria; soybean fields in central Illinois, southern Minnesota, northern Iowa, and Arkansas; processing plants at Decatur, Minneapolis and Mankato; the Chicago Board of Trade; and the Memphis Board of Trade; the Depart-

ment of Agriculture's grain grading facilities at Chicago and Memphis; headquarters of the American Soybean Association and the Soybean Digest at Hudson, Iowa; country elevators and barge loading facilities on the Illinois and Mississippi rivers; and the ports of New Orleans and Mobile.

The tour ended with conferences with Department of Agriculture officials and representatives of the American Soybean Association and the Soybean Council of America in Washington, D. C.

On the Cover

In the top picture on the cover are, front row, left to right: Saihei Toriumi, Yukio Sakaguchi, ASA President Albert Dimond, Goro Kawamura, Kumazo Abe, and Keiichi Matsuoka.

Back row: T. Ogasawara, Yoshio Tanaka, S. Morohashi, Ichio Matsuhara, and K. Isobe.

Members of the Official Visitation Team to the United States, Japanese-American Soybean Institute, August 1854.

Yukio Sakaguchi Vice President, Oil and Fat Manufacturing Association Tokyo, Japan

Goro Kawamura President, Japan Miso Association Tokyo, Japan

Kumazo Abe President Japan Tofu Association Tokyo, Japan

Saihei Toriumi Vice President, Japan Shoyu (Soysauce) Association Tokyo, Japan

Keiichi Mctsuoka President, Japan Oil and Fat Exporters and Importers Association Tokyo, Japan

Traveling unofficially:

Yoshio Tanaka Ajinomoto Co. Yokahama, Japan

Ichio Matsuhara Chief Inspector and Vice President, Japan Oilstuff Inspectors Corp. Kobe, Japan

T. Ogasawara Nichiei Bussan Co., Ltd. Tokyo, Japan

Serving as interpreter:

S. Morohashi Japan Cotton and General Trading Co., Ltd. Portland, Ore.

American Soybeans in Japan

By YUKIO SAKAGUCHI

Vice President, Oils and Fats Manufacturers' Association, Tokyo

Japan will have to import greater quantities of soybeans in the future, and will rely on U. S. soybeans if problems can be solved

ON BEHALF of the Japanese soybean delegation consisting of five representatives, Goro Kawamura, president of Japan Miso Association; Saihei Toriumi, vice president of Japan Shoyu Association; Kumazo Abe, president of the Japan Tofu Association; Keiichi Matsuoka, president of Oil and Fat Importers and Exporters Association, and I, Yukio Sakaguchi, vice president of Oils and Fats Manufacturers' Association, I wish to express our sincere gratitude to the American Sovbean Association for having invited us not only to attend this convention but to visit various places of interests and study conditions for the eventual benefits of both you and ourselves.

In Japan, as you probably know, soybeans are consumed not only for oil extraction but also for various food products such as Shoyu sauce, Miso, Tofu and Natto, etc., also for making Monssodium Glutamate. We need 900,000 to 1 million tons of soybeans for these purposes. Although about 500,000 tons of domestic soybeans are produced a year, most of them are consumed by producers themselves and only about 200,000 tons are sold in the market. The balance, 700,000-800,000 tons, therefore, depends on imports.

Approximately 500,000 tons of soybeans in 1954 and 800,000 tons in 1955 were imported to Japan, out of which 440,000 tons in 1954 and 570,000 tons in 1955 were imported from the U. S. A. I am sure Japan is one of the best customers for your country so far as soy beans are concerned.

Before World War II, Japan depended solely on Manchurian soybeans but since the end of the war, owing to various difficulties involved in importing from Communist China. U. S. soybeans have taken the place of Chinese beans. However, it is noteworthy that lately due to the difference in freight distance in favour of Chinese beans and the fact that quality of Chinese beans is

1956 CONVENTION
ASA in print

more suitable for food products than are American beans, import of Chinese beans is gradually increasing. That is to say, imported Chinese beans have been increased to 200,000 tons in 1955 from only 50,000 tons in 1954. Whereas the total imports of U. S. beans have decreased to 71% in 1955 and 95% in 1951, Chinese beans have come up to 25% from 3% in the same years.

U. S. soybeans are better in oil content but contain more foreign material, damaged beans, broken beans, other seeds and other colored beans than Chinese beans. If improvement can be made in these points I am sure Japan will come to buy more U. S. beans in the future.

Since Japan's consuming level of oils and fats at present is still very low as compared with other world nations and further in view of the demands for soybeans for various food manufacturers are increasing. I believe considerably greater quantity of soybeans will have to be imported in the future.

It is therefore desirable that an overall study involving not only in respect to quality but also to other trade conditions and loading be made. Fortunately through the efforts of your Association, your government and your people, the Japanese-American Institute has been established having as its members the American Soybean Association and the five Japanese organizations and is carrying out activities since early this spring. The various pending problems mentioned will surely be solved satisfactorily through the efforts of this Institute.

Taking this opportunity, we wish to assure you that we will cooperate with the Japanese-American Soybean Institute in its activities.

In conclusion I again wish to thank you for having offered us a chance to attend your convention and to see and talk with all those concerned in the soybean industry in the U.S.A. At the same time, we sincerely hope that the friendly relations between the U.S.A. and Japan will be ever strengthened through the trading of soybeans.



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San Diego 12, Calif.

Fats and Oils Under Public Law 480

Government's edible oils programs are designed so soybeans will be crushed rather than stockpiled. An address before the Processor Association

By GORDON O. FRASER

Assistant Administrator, Foreign Agricultural Service, before the annual meeting of the National Soybean Processors Association at Urbana, III.

HAVE been asked to speak to you on "Public Law 480 as it relates to fats and oils."

The Agricultural Trade Development and Assistance Act of 1954, as P. L. 480 is officially called, has as its central purpose the promotion of trade in U. S. agricultural products through the use of surplus commodities. The Act provides three Titles under which surplus commodities may be exported.

For the moment I'll skip over Title I under which sales for local currencies are made to friendly countries.

Title II authorizes donations of surplus agricultural products to be made by our government to provide emergency relief to foreign countries in times of disasters such as earthquakes, floods, crop failures and famine. These donations may be made to any nation whose people are considered friendly to the United States even though their government may not be.

Title III of the Act permits donations of CCC-owned commodities to private relief agencies and to intergovernmental organizations, such as the United Nations Children's Emergency Fund, for distribution here at home and abroad. This Title also permits the barter of CCC-owned surpluses for strategic materials from friendly countries.

The use of surpluses for donation or barter is not new in U.S. government programs, but the opportunities to do so are greatly expanded under P. L. 480.

Most of you are probably more familiar with Title I programs of P. L. 480. It is under Title I that sales are made of our surplus commodities in exchange for the currency of a foreign country. The first step is the negotiation of a sales agreement between our government and the foreign government. The sales agreement permits foreign importers to purchase the commodities specified with their own currencies which are deposited to the credit of the U.S. government. The commodities are sold and exported by our private

trade who are reimbursed in dollars by the Commodity Credit Corp. I'll come back later to the uses being made of the local currencies which have been acquired through our Title I sales.

Public Law 480 is not intended to take the place of the regular commercial trade in agricultural products. In fact, the Act requires safeguards to be written into every agreement that the purchases made by the foreign country under Title I will not displace its regular imports for dollars. In practice, the agreements generally provide that the foreign country must spend a stated amount of dollars, representing its normal purchases, for imports of the respective commodities covered by the agreement. The Department of Agriculture, and the entire Administration, place first emphasis on regular commercial exports for dollars. And to the greatest extent possible, the commodities exported under the Act are routed through private trade channels.

P. L. 480 was conceived as a temporary measure to bridge the period of adjustment between supply and demand for our surplus commodities. Our domestic agricultural program is aimed at bringing about a better balance of production and supplies. P. L. 480 is intended to help achieve this balance through expanded exports.

Exports Under P. L. 480

Our exports of all agricultural products totaled \$3.5 billion in 1955-56, as compared with \$3.1 billion in the previous year. Exports under all titles of the Act accounted for about \$900 million, or roughly 25% of the total 1955-56 exports. Nearly half of the P. L. 480 export shipments were made against sales for foreign currencies under Title I.

By June of this year, we had committed virtually all of the \$1.5 billion authorized by Congress for sales for local currencies, and, as you know, Congress increased the authority in July by an additional \$1.5 billion. We have entered into some new agreements with foreign governments since the increase was approved, and, at the present time, we now have made a total of 63 sales agreements with 28 countries. In terms of the cost to CCC, the total

value of the commodities involved now stands at \$1.6 billion.

In terms of the export market value, which is somewhat less than the CCC cost due to the difference between the acquisition cost of wheat, cotton and other commodities under the price support programs and world prices, the total stands at just over \$1 billion. Of this, wheat made up 28%, cotton 27%, and oils and fats 17%. I should mention that, with few exceptions, since 1954 oils and fats have been priced in our markets at levels that were fully competitive in world markets. Other major products programmed under Title I are tobacco, feed grains, rice, and dairy products.

Local Currencies

It might be of interest to you to describe what use is being made of the cruzeiros, yen, pesetas, dinars, etc., being acquired abroad for our sales under P.L. 480.

Up to the present, 49% of these local currencies have been set aside to be loaned to the foreign governments for economic development purposes. It is hoped that these loans will assist in the stimulation of economies, particularly those of the underdeveloped countries, so that their capacity to purchase our agricultural products on a normal commercial basis will be improved.

Another 16% of the local funds is being used to cover common defense needs abroad. Small amounts are also being used for the purchase of strategic materials, to finance international educational exchange activities and for other worthwhile purposes.

Of particular interest to agriculture are the local currencies reserved for market development purposes. About 2% of the total has been set aside for this purpose and under the sales agreements entered into so far, a total of about \$20 million will be available. Programs for the use of these funds are administered by the Foreign Agricultural Service.

Market Development Programs (Sec. 104a)

You might be interested to hear about these market development programs in a general way, especially since we already have some contemplated or under way for soybeans and soybean products. Al-

Soybean Dust Problems Solved by Sturtevant Air Separator



RIGHT: Spencer Kellogg & Sons employee making classification adjustment on Sturtevant Air Separator in operation at Bellevue, Ohio, soybean meal plant. Separator minimizes air-borne dust losses while removing hulls and classifying end product.

LEFT: Two lead-off chutes at bottom of Sturtevant Air Separator in Spencer Kellogg & Sons plant. One chute in the closed circuit system sends to packaging all uniform size, dust-free meal while the other returns all undersize fines for pelletizing.

Closed Circuit Air Separation Cuts Losses, Keeps Plant Cleaner, Improves End Product

Dust — finer than 80 mesh — was accounting for 4 to 5 percent of the soybean meal production at the Spencer Kellogg & Sons plant in Bellevue, Ohio. Much of this dust was disseminated into the air during processing, becoming a total loss. And such free dust made working conditions unpleasant, plant and storage sheds untidy in appearance. Also, the proportion of dust retained in the end product was an annoyance to farmers and ranchers.

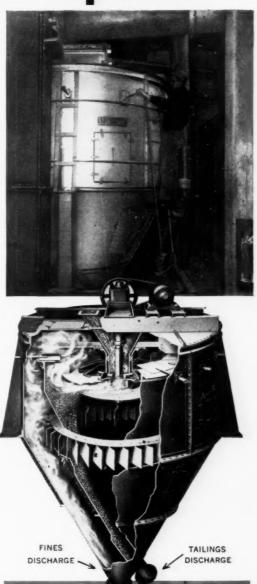
All of these problems have been solved by a Sturtevant Air Separator operating in closed circuit with a pelletizing machine. The processed soybean meal goes through the Air Separator at the rate of about 85 tph. Particles representing dust and hulls go out the fines chute to the pelletizer. The pellets are then ground and re-circulated through the Air Separator at rates to 10 tph, bringing the machine's total capacity to 95 tph.

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. . Export projects joint effort of trade, government

though only 2% of the foreign currencies becoming available through Title I is being used for market development programs, the absolute amount is large—it stood at about \$20 million on July 1 this year and the problem of setting up sound programs and finding personnel for administering them consititutes more of a problem than the amount of money available.

The Department of Agriculture cooperates closely with U.S. trade groups in initiating and carrying out marketing development projects. It is our rule also to enlist the cooperation of foreign trade groups. In most cases, the bulk of the funds required for the project are supplied by the U.S. government, from the foreign currencies received as a result of Title I sales, but the cooperating foreign trade group is expected to finance a part of the costs. The U.S. trade group has primary responsibility for carrying out the project, and it finances any dollar costs. The Department of Agriculture acts in an overall supervisory capacity in the project. This procedure gives trade groups in the United States and abroad the opportunity to work together on the problems of expanding old markets and developing new ones for U.S. agricultural commodities. It ensures that projects are beneficial to both the United States and the foreign country.

A wide variety of market development projects have been approved so far. They can be classified into five types: market surveys; nutrition education; two-way visits; advertising and sales techniques; and trade

fairs.

Market surveys are designed to appraise the potential demand for particular products and to determine how the demand may be developed

and supplied.

Projects for education in nutrition are aimed at improving the health and welfare of people abroad and at the same time expanding the market for farm products that can be supplied by the United States.

Visits by foreign officials and experts to the United States and U. S. people to foreign countries have been arranged to increase the understanding, on both sides, of marketing and other problems that arise here and abroad in connection with the trade in U. S. agricultural products.

U.S. advertising and sales techniques are being used abroad with appropriate variations to meet local

conditions.

Market development projects are also conducted through participation in international fairs. The United States participates in two types of fairs: one is the diversified fair of a largely industrial type, the other is the food fair. Exhibits are planned where the greatest number of

potential buyers are expected to congregate. Typical of the agricultural exhibits staged abroad was the market promotion exhibit at the International Trade Fair held in Osaka, Japan, last April. The U.S. exhibit demonstrated the availability, quality, and uses of U.S. dairy, wheat, cotton, tobacco, rice, and soybean products. Market promotion exhibits are not limited to trade fairs; however, one of the largest exhibits was the "supermarket" erected in Rome, Italy, last June in connection with the International Congress on Food Distribution.

In the field which directly concerns your industry, the market development work has resulted in the formation of the Japanese-American Soybean Institute. This grew out of a trip to Japan last fall by George Strayer and Howard Kurtz of the Board of Grain Supervisors in Chicago. There had been a series of complaints from Japan about the quality of U.S. soybeans and threats that much of the business might be lost to Communist China. As a result of their study, Mr. Strayer and Mr. Kurtz emphasized that the Japanese use soybeans mainly for food. and that in this use green seed-coats and certain types of foreign material were especially objectionable. Chinese - Manchurian soybeans are claimed by the Japanese to be virtually free of foreign material and to have vellow seed-coats as well as interiors. The team found, however, that the Japanese are better satisfied with U.S. soybeans since the U.S. grading standards were revised last September. They concluded that the market for U.S. soybeans in Japan can be maintained or even expanded.

On the basis of the findings and recommendations of these two men, the Department entered into a contract with the American Soybean Association to carry out market development work in Japan. The Association, in turn, joined hands with the various soybean trade interests in that country to form the Japanese-American Sovbean Institute. purpose of this Institute is to foster closer relationships between the soybean trade groups in the two countries, exchange technological knowhow to encourage use of U.S. soybeans in food and other products, establish mutual understanding of trading practices and methods, and disseminate appropriate educational and promotional material in Japan. The Institute has sent a delegation to the United States and they are present here today. They will spend about a month in discussions with the U.S. trade and in firsthand observation of U.S. practices in harvesting, storing, shipping, and sampling and grading soybeans.

A new contract has just been com-

pleted for market development work in Europe and the Middle East between the Department of Agriculture and the American Soybean Association and the Soybean Council of America.

Fats and Oils Exports

Now, I would like to discuss with you in more detail the exports of fats and oils under P. L. 480. Programs to export fats and oils under all these titles of P. L. 480 since its beginning (July 1954) add up to nearly 1.5 billion pounds.

We can now narrow our attention to the recent programs that you are most closely concerned with. These are the Title I agreements providing for edible vegetable oils. In the fiscal year ended June 1956, agreements of this kind were concluded with 13 countries. About \$118 million was allotted, permitting the purchase of approximately 700 million pounds of cottonseed and soybean oils. Spain was the leading country in these programs with \$50 million or about 280 million pounds. Argentina ranked second, with nearly \$25 million or about 175 million pounds. The agreement with Chile calls for \$12.5 million or about 70 million pounds; and for Italy, \$10 million or about 60 million pounds. Other countries included are Greece, Turkey, Israel, Ecuador. Peru, Colombia, Iran and Paraguav. Some of these agreements included lard as an optional commodity but all of these countries, except Korea, chose to take edible oils exclusively since the preference of the people in these countries is for liquid oils rather than solid fats in the kitchen and on the table.

Shipments under these programs by the end of June totalled about 400 million pounds, 60% of the total program. July shipments are estimated to have been about 45 million pounds, and it is probable that by the end of September the total will reach 550 to 600 million pounds. This will leave a carryover of 100 to 150 million pounds, from the programs that have already been announced, to be shipped in the new marketing year beginning Oct. 1, 1956.

Outlook

We are frequently asked to explain why and under what conditions an agricultural commodity is or is not declared eligible for financing under P.L. 480. The answer necessarily hinges on the definition of a surplus commodity. The Act provides in brief that a "surplus agricultural commodity" is a U.S. agricultural commodity either publicly or privately owned which is or may be reasonably expected to be in excess of domestic require-

ments, adequate carryover and anticipated exports for dollars, as determined by the Secretary of Agriculture. In other words, the Secretary must make a finding based on the best information available as to supplies and expected domestic and foreign sales for dollars. In the case of, say, wheat or cotton there is no problem and the calculations are a mere formality to determine the extent after dollar sales have been maximized. In case of edible oils the answer is considerably more involved. For all practical purposes the CCC has no stocks of oilseeds or edible oils and thus there is no surplus in this sense. But the Act also covers a situation where a commodity is "reasonably expected to be in surplus," so we can and have used P. L. 480 to help prevent the building up of government stockpiles as well as to reduce or remove past accumulations

The edible oils program this past year was designed to expand the foreign market so that soybeans would be crushed rather than piled up to the account of CCC. While there were some rough spots in the program, you are all aware that this major objective was accomplished.

We have now reached a time when we are looking at the crop ahead. Many may have assumed that there certainly must be a surplus of edible oils coming up within the meaning of P.L. 480 because of the magnificent prospects for the soybean crop this year. With USDA's August crop report now in hand, there appears to be little doubt that this assumption is correct. There are, however, some factors that partly offset the heavy increase in the soybean crop. Cotton acreage is down slightly and the yield per acre this year is likely to be slightly less than last year's altogether exceptional figure. Hence, there will be some decline in cottonseed oil production in 1956-57. Lard production will fall off substantially in the year beginning this October. Finally, heavy exports in the current marketing year, along with a normal domestic disappearance, are reducing stocks of edible oils. It is estimated that these stocks, beginning in October this year, will be considerably smaller than on last Oct. 1. It is fortunate that we can face this record soybean crop with low beginning inventories.

Let me say again that our main objective is to maximize exports for dollars. U.S. fats and oils enjoy a tremendous dollar market abroad. In recent years there has been a steady increase in this demand reflecting the economic progress made by most countries and particularly the leading importers of fats and oils—Western Europe, Japan and

Canada. For example, we should expect to export some 75 million bushels of soybeans and perhaps 500 million pounds of edible oils next year on a straight commercial basis for dollars. Our regular customers, some traditional and some rather newly won, such as Canada, Cuba, Belgium, Germany, the Netherlands and Spain, will be purchasing large quantities of oil for dollars.

Now what are the prospects for P. L. 480 fats and oils programs during 1956-57? At this point it would be well to remember that there will be a carryover from the 1955-56 programs including the one for Greece announced last week, of at least 150 million pounds to be shipped out of 1956-57 crop-year supplies. Adding to this more than 100 million pounds for past commitments under Title I not yet formalized and for possible ICA programs we have almost 300 million pounds of edible oil already in the export column for P. L. 480.

I think you will agree that it is too early in the season to be definite as to the total prospects for additional P. L. 480 sales of edible oils in the year ahead. I can assure you, however, that we will use P. L. 480 to the fullest extent justified in the light of available U. S. supplies, domestic requirements, anticipated exports for dollars and the requirements for an adequate carryover.

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Marketing Problems of U. S. Soybeans in Europe

Dissatisfaction with U. S. soybeans due in part to misunderstanding.

Report of International study team

By ELMO A. SHAW

Board of Grain Supervisors, Agricultural Marketing Service, U. S. Department of Agriculture, Chicago, III.

IN RECENT years the U.S. Department of Agriculture has received a number of complaints relative to the quality of American soybeans received at European ports. In an effort to evaluate justification of these complaints an official team comprised of two Americans and two Europeans was chosen and a project was undertaken to observe the loading, sampling, and grading of soybean cargoes at United States ports and the discharge, sampling, and grading of the same cargoes at European ports. Three cargoes of soybeans were covered under this study.

Conference Table

In addition to observation of the handling of the three cargoes, the team assembled at a conference table on several occasions with oil seed crushers and processors in England and on the Continent. Virtually all phases of soybean production, marketing, grading, and usage were discussed. Several soybean factory grading laboratories were visited, as well as the official laboratories of the Rotterdam Trade Association and the Incorporated Oil Seeds Association in London. All official analyses and grading of the discharged soybeans were performed in the I.O.S.A. laboratory.

Foremost among complaints received from foreign buyers of soybeans have been those relative to excessive amounts of foreign material. There have also been complaints on green seed-coated and purple mottled soybeans.

It will be recalled that effective Sept. 1, 1955, U. S. standards for soybeans were changed whereby the maximum foreign material content was reduced by 1% in each of the numerical grades. In my opinion this was a much needed change and has resulted in a very marked improvement in the appearance and quality of soybeans being exported from the United States today.

Since soybeans for export are sold on a certificate final basis in the United States, they are not usually officially sampled and graded at

European ports. If they were officially sampled and graded in Europe, the foreign material content would be based on non-soya matter only. When considered on a non-soya matter basis only, the difference in results between samples drawn in the United States and those drawn in Europe, on the three cargoes under study, was most gratifying. On the largest of the three cargoes, a 414,-000-bushel shipment, the difference was only .04%. On the other two cargoes, the difference in results was only slightly more than a variation which might normally be obtained on analyses of two different portions of the same sample.

When the samples drawn in Europe were graded under official U. S. Grain Standards Act methods, using the 8/64-inch round-hole sieve to remove the readily separable foreign material, the results were not encouraging. Under our grading methods, the maximum foreign material content permitted in the No. 2 grade was exceeded on four of six tests that I made in London. When soybeans are reasonably dry, they are by nature a rather brittle grain. Since the non-soya foreign material checked very closely on opposite sides of the Atlantic, this increase in foreign material obtained on European samples under U.S. grading procedures can only be attributed to an increase in finely broken soybean particles produced in the loading and discharge operations.

Our discussions in Europe disclosed that some of the complaints we have received arose from a failure to properly understand the application of our standards. In Denmark, for example, it had not been understood that our green seedcoated soybeans were properly classified when certificates of grade were received describing them as yellow soybeans. Danish processors prefer yellow seed-coated soybeans. They stated the oil produced from green soybeans carries a slightly greenish tint and is not so readily salable as the oil of yellow soybeans. They also stated that while definite conclusions have not been reached, they are not sure that green soybean oil possesses as stable keeping qualities as yellow soybean oil.

Since approximately 80% of the U.

S. crop is of yellow varieties, we were asked many times why green soybeans are usually received from this country. Objection to purple mottling was not particularly stressed when it was explained that our No. 2 grade permits a limited percentage of purple mottled soybeans.

Oil Content

One German crusher said soybeans of the 1955 crop from one of our surplus producing areas ran 1% clower in oil content than the 1954 crop from that area. He also said oil of the 1955 crop from this same area was of lower quality than that of preceding crop years. He then expressed a desire for information on percentage of oil content for all producing areas in the United States shortly after harvest time each year, and asked if this information were available and where it might be obtained.

Questions were asked regarding the number of inspections that may be made on a given lot of soybeans in this country. We were questioned as to whether additional changes are contemplated in the standards. We were involved in discussions on soybean culture and of principles of economics when questions were raised as to why American soybeans are not as clean and free of foreign material as Manchurian soybeans.

It is believed our mission to Europe achieved some worthwhile results. Soybean production in the United States has expanded in recent years until it is now an important segment of the national economy. Due chiefly to increasing exports we have not yet produced a surplus of this crop. To hold and increase our export market, let us not be unmindful of the needs and wishes of the foreign buyer. If at any time the quality of our exports needs improvement to hold our position in the world market, we should not hesitate to make such improvements, insofar as they would be compatible with production and usage in our own land.

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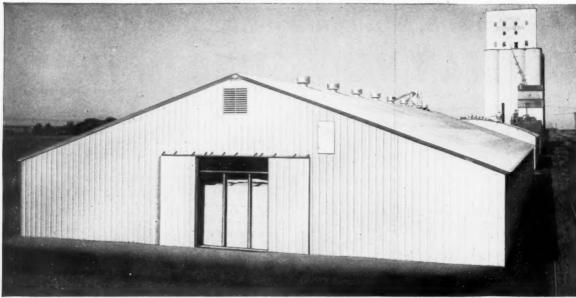
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Marketing Problems of U. S. Soybeans in Japan

Change in U. S. grading standards was a big step in the right direction

By HOWARD D. KURTZ

Eoard of Grain Supervisors, Agricultural Marketing Service, U. S. Department of Agriculture, Chicago, III.

THE PURPOSE of my visit to Japan was to study the Japanese soybean requirements in relation to our U.S. grades and standards; to learn more about the uses they make of our soybeans, and the marketing problems involved.

The Department had from time to time, as this group knows, received quality complaints on certain deliveries. It was therefore thought a firsthand knowledge stood to aid us in developing standards that might better reflect character and quality from the export standpoint, for we in the Department are just as much interested as you folks in industry, to see that the grades enable buyers, both domestic and foreign, to get the kind and quality of commodities they want and need.

To sum up briefly, from observations and discussions with Japanese industry people, the major marketing problems insofar as quality is concerned can, I believe, be broadly stated under two primary headings: foreign material and color.

Foreign Material: Comments by the Japanese indicated that we made a big step in the right direction last year when we reduced our foreign material by 1%. It is believed the Japanese interests are now reasonably well satisfied with the overall allowance of total foreign material. The kinds of foreign material contained in some of our deliveries, however, still remain a problem. The food manufacturers in particular object to such material as stems and certain weed seeds as they affect both the palatability and appearance of their products. For food purposes this is readily understandable.

Due to the nature of my assignment, considerable time was spent observing the unloading of cargoes. The average results between the U.S. inspection and the Japanese inspection checked remarkably close, especially when one considers the

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handlings that occur between inspections. The Japanese use our standards and apply them in a manner similar to the way they are applied in this country.

I did find, however, uneveness in foreign material in occasional holds of our ships, even though I am satisfied uniformity existed at the time they were sampled at our ports. As you know, soybeans containing foreign material are difficult to load uniformly in any type of container, because foreign material does not flow freely as do the soybeans. When this condition exists and our cargoes are broken up into many small lots, such as they are in Japan, the party receiving his delivery from an area of high foreign material is not satisfied. In fact, it appeared that many of our past complaints on the foreign material factor have probably stemmed from this distribution problem.

Color: It was apparent the Japanese do not like any form of green coloring in soybeans. The oil people object to the color the green soybeans give oil, and to the reduced price they take when they market the flakes to the food people. The food manufacturer objects to the color the green soybeans give their product. To illustrate the importance the Japanese place on color, in addition to their inspectors showing the usual quality factors, the trade requires them also to show the percentage of light and dark green kernels. Color is a quality guide in that country. From observations both in Japan and since my return, it does not appear that the present Illinois-Minnesota origin buying arrangement is the solution to this problem. By this I do not wish to imply that it has not accomplished anything, rather it appears to have served its usefulness.

It would seem the color problem could best be solved by separately classifying the green and yellow seed-coated soybeans under the framework of the standards. Our quality certificate itself could then better relate an accurate picture of the type of soybeans inspected.

Color again enters into the picture in the form of purple mottling. Due to this not being pronounced in our Midwest and Midsouth crops the past two seasons, emphasis in Japan was not placed on this factor. Should we encounter years again though where they are prevalent, comments indicated there would be serious objections.

Another indirect color problem in Japan deals with our splits. High percentages of splits are objected to, especially by the miso and tofu industries. They contend that soybeans that have been split for long periods of time fade and lose their natural yellowish color, resulting in a food product that has a dull appearance.

It is believed if we can iron out most of these quality problems, through the combined efforts of all concerned, it will help put our trade with Japan on a much more solid foundation.

Costa Rican Imports

COSTA RICA'S imports of hydrogenated cottonseed and soybean oils—largely from the United States—are expected to increase in 1956 to 720 short tons from the 580 tons in 1955, reports the U. S. Department of Agriculture.

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Price Outlook for 1956 Soybean Crop

By T. A. HIERONYMUS

Associate Professor of Agricultural Marketing. University of Illinois College of Agriculture.

Sees \$2.10 at Illinois points as most likely average price on 1956 crop

THERE is another record crop of soybeans being produced this year. The Aug. 1 USDA crop estimate was 443 million bushels—by far a new record. Ten years ago it looked as if soybean production might be leveling off at about 200 million bushels. From 1950 through 1953, production centered around 300 million bushels. The increase has amounted to about 50% in 3 years!

There is some limit to how much the crop can expand. It would, however, be hazardous to guess at its ultimate size. The ultimate is still to be reached unless some serious pricing mistakes are made. But it may be necessary to slow down the rate of growth while consumption catches up. The problem may be in rate of expansion of markets rather than ultimate size of markets.

The rapid expansion in soybean production in recent years has been due in large part to government price support programs. We may be in a period of changing emphasis in agricultural supports. It is doubtful that governmental programs will be so important in the future expansion of the crop as they have been in the past.

Too Early for Forecast

It is early in the season to be forecasting soybean prices because of the uncertainty about production. Last year the final crop estimate was 12% below the Aug. 1 estimate; in 1954, 13% above; in 1953, 9% below; in 1952, 13% above, etc. Estimates have, however, gone up more than they have gone down.

Supplies of products. A year ago at this time the crop was estimated at 420 million bushels. The question at that time was whether so many soybeans could be used at some reasonable price. Because the weather was unfavorable, this test was not made. A record quantity was used at very acceptable prices.

But the same question applies again this year: Can this huge supply be used up?

With production at 443 million bushels and the prospective carryover at 5 million, the total supply is expected to be 448 million bushels,

Exports of soybeans have been increasing. Thirty-two million bushels were exported from the 1952 crop, 39 million from the 1953 crop, and 60 million from the 1954 crop, and it now appears that exports from the 1955 crop will be above 65 million bushels in spite of quite high prices last spring. With a continued high level of economic activity throughout the world, exports will be likely to increase again. For preliminary planning purposes, 75 million bushels seems a reasonable figure

Seed requirements for another large acreage will amount to about 30 million bushels.

If the prospective crop materializes, a carryover should finally develop. A normal carryover of a crop is 5% to 10% of production. Because of the limited number of uses for soybeans, particularly on farms, the carryover will probably tend toward the lower end of the range. This means about 20 million bushels.

Subtracting exports, seed, and carryover from total supply, we get a crush of 323 million bushels. A crush of 323 million is 16% larger than we had this year and 30% larger than last year. It averages 27 million bushels per month, an increase of about 4 million bushels per month over this year.

A crush of this size will make 7.6 million tons of meal and 3.6 billion pounds of oil. At what prices can these quantities be used?

Soybean oil prospects. Soybean oil is part of the total supply of edible fats and oils. Four fats make up 90% of U. S. supplies of edible fats. They are butter, lard, soybean oil, and cottonseed oil. Three of them, lard, soybean oil, and cottonseed oil, and cottonseed oil, make up 80% of the total. For simplicity's sake, I use these three in looking at the soybean oil situation.

The United States produces more edible fats and oils than are required in domestic consumption. For the past several years, production of the big three has exceeded domestic use by 1.5 to 2 billion pounds. This domestic surplus has sometimes been exported and sometimes placed in inventory. Domestic utilization does not increase in response to increases in production. Unmistakably the key market for U.S. fats and oils is the world market.

Production of the big three fats (lard, cottonseed oil, and soybean oil) in 1956-57 will total 8.6 billion pounds. This includes the oil content of soybeans exported. Lard production should total 2.5 billion pounds, down about 10%. On the basis of the Aug. 1 estimate, cottonseed oil production will be around 1.7 billion, down 8%. Soybean oil makes up the balance—more than one-half!

Carryover Smaller

Carryover supplies will be somewhat smaller than last year and the smallest since 1951. For preliminary planning purposes, the carryover of these three fats on Oct. 1 can be estimated at 595 million pounds. While small compared with recent levels, this is a liberal supply. There is nothing to indicate year-end tightness.

The total supply of fats, including carryover, will therefore be 9.2 billion pounds compared with 9 billion last year. More precisely, the indicated increase is 153 million pounds. That will set a new record.

Domestic disappearance is increasing at the rate of about 250 million pounds a year. Assuming a similar increase in the year ahead and an Oct. 1, 1957, carryover of the same size as this year's, the exportable surplus will amount to 2,112 million pounds. I am currently estimating exports for the year ending next Oct. 1 at 2,218 million. Exports must be only 100 million pounds less in the year ahead than they now are.

Exports of fats are now at a very high level. In 1952-53 we exported

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944 million pounds; in 1953-54, 1,304 million; in 1954-55, 1,939 million; and, as noted, 2,218 million this year. Can a record quantity again be exported?

About 730 million pounds of edible vegetable oils were included in agreements negotiated under Public Law 480 during the year ending June 30. About 250 million pounds remained unpurchased on June 30. This program has been a major factor in exports the past year. Congress has doubled authorizations for the year ending next June 30. Heavy reliance is being placed on this program to again boost exports.

I am not certain that so much optimism about this kind of program is justified. It is real money that is being spent even though it is not dollars. Countries will pick and choose the kind of products they wish to spend their allocations for, and the United States has a long list from which they can select! Unless there is a genuine need for fats and oils, and unless fats and oils are attractively priced, our exports will decline.

Favorable Prospects

Long-run export prospects for fats and oils are basically favorable. World population is increasing at a rapid rate. The basic need for food will continue to increase. Per capita consumption of fats is low in many parts of the world. And people throughout the world, particularly in Asia and Russia, are bringing pressure for better diets.

Production of edible fats and oils outside the United States is increasing very slowly. The United States is the world's only importantly increasing source of edible fats.

Exports of edible fats and oils in the year just ending were boosted by two events. The first was failure of the Argentine sunflower crop, which enabled the United States to sell 175 million pounds of oil to that country. The second was the near failure of the Mediterranean-Basin olive crop.

What are the prospects for the year ahead? The Argentine has a big crop of fats and oils which will enable it to export about 100 million pounds. This added to the 175 million pounds sent there from the United States last year makes a difference of 275 million in our exports. The Mediterranean olive oil crop is estimated at 1.9 billion pounds, an increase of 300 million. If both of these crops materialize, a place to export about 420 million pounds of edible fat needs to be found.

Tending to offset the increase in the Argentine crop and the Mediterranean olive oil crop will be declines in the production of rapeseed in Europe and peanuts in India. The severe European winter extensively damaged the rapeseed crop, causing Sweden to be short some 80 million pounds and France, 30 million. India exported large quantities of peanuts during the past year. Her supply appears to be smaller this year, and competition from that source should decrease. Also, Argentina will absorb a high proportion of her increase to replenish her own depleted stores.

When all of these pluses and minuses are totaled, it appears that world production outside the United States will be up moderately and that the increases will be in countries to which the United States has exported substantial quantities during the past year. The demand for U. S. fats and oils will be less vigorous in the year ahead, and world prices will likely be lower if all available U. S. supplies are exported.

On the basis of experience during the 5 years beginning in 1951, the price of soybean oil, bulk Decatur, will probably average 11 to 12c a pound for the year.

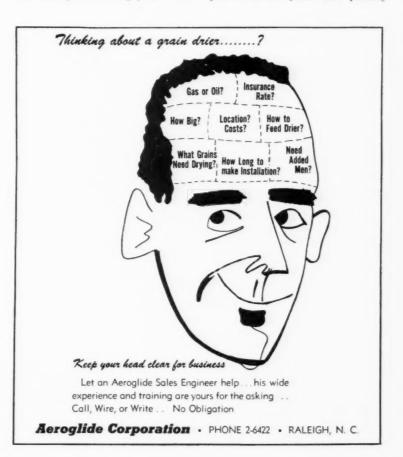
Soybean meal prospects. The supply of soybean meal will be abundant during the coming year. The

following figures, showing production of meal in recent years, emphasize the remarkable size of this year's supply:

Year beginning Oct. 1	Million tons
1948	4.3
1949	4.6
1950	5.9
1951	5.7
1952	5.5
1953	5.1
1954	5.7
1955	6.5
1956	7.6

There is a basic shortage of high protein in livestock rations. This is true even though the quantities consumed are more than 1.5 times as much per animal as they were 15 years ago. This increase is at the rate of about 3% per year and has been achieved without a decrease in the price of soybean meal in relation to feed grain.

Record quantities of soybean meal have been used in the year just ending. The increase amounted to about 12% over the preceding year and was accomplished at satisfactory prices. I think there is no question but that production of 7.6 million tons a year can be absorbed at favorable prices. But the sharp increase may be more than can be accomplished in one year. The quantity



.. "Outstanding thing is the tremendous supply"

used in 1955-56 is in line with the rate of growth from 1950—that is, the 3% per year. The quantity to be used in the year ahead exceeds this rate.

I have a formula by which I forecast the price of meal. In the past it has worked comparatively well. It involves the production of meal, numbers of livestock, prices of livestock, and sales of formula feeds. I have already indicated what the production of meal will be.

Livestock numbers will be somewhat lower in the year ahead than in the year just ending. The USDA has indicated a decline of 7 to 8% in hog numbers. Broiler production is about 20% greater this year than last. It is doubtful that this rate can be maintained, but some increase appears likely in the year ahead. Numbers of farm chickens will continue at a relatively low level but will probably exceed this year's figure to some extent.

Livestock and livestock product prices have been increasing in recent months. With smaller numbers and a continued high level of employment and income, prices should be higher next year than in the year now ending.

Formula feed sales have a longterm uptrend. This increase should continue but will be about offset by decreases in livestock numbers.

I do not expect my forecasting formula to be of much value this year. Mathematical formulas are based on past experience, and we have had no experience with the large volume that will be produced this year. The formula says the average price of unrestricted meal, bulk Decatur, will be \$39.75 during the year beginning Oct. 1, 1956.

Such a price would put meal substantially below corn if the \$1.25 support rate on corn is effective. Most certainly meal is worth as much as corn. But the price of corn may be the only effective bottom in the meal market this year.

All things considered, and assuming that the current crops materialize, I am prone to think in terms of a \$43 to \$50 range for meal.

Soybean prices. The third thing that needs to go into the calculation of soybean prices is the processing margin. Full crushing capacity was approached at times this year. There is enough capacity, I think, to crush the estimated 323 million bushels. But it will have to be fully used. Under these circumstances a wider margin than in recent years is to be expected: 22¢ per bushel on the basis of 11- and 47-pound yields per bushel of soybeans seems a likely figure.

Using the mid-points and putting all three of these factors together, I would estimate a price of \$2.10 bid to farmers at east-central points. Prices for other areas can be adjusted on the basis of their usual relationship to Decatur.

This price is about 5¢ below the support loan, taking storage cost into account. If past experience is a reliable guide, the discount under the loan will be greater at other points in the soybean belt.

It follows from these estimates that

substantial quantities are likely to be impounded into the loan. The effect will probably be to (1) increase the price of soybeans to about the loan level once the harvest period has passed, and (2) to develop a surplus of soybeans in the hands of CCC.

Seasonal variation. Three things need to be said about seasonal variation in the year ahead:

First, in recent years decreases in soybean prices after harvest have been about as common as increases. But the increases have been greater than the decreases. Farmers' holding operations and general speculative interest have been one year out of phase. Because of the action of prices during the past year, there is apt to be over-holding and overbuying, which can have the effect of helping to create a down-trending price pattern.

Second, if the tremendous supply materializes, and if currently indicated supplies of fats and oils outside the United States are correct, there will be very little chance of a major increase in the price of soybeans during the year ahead.

Third, the effectiveness of the loan rate in preventing a harvest decline has never been tested. The crop must be put into proper storage before loans can be obtained. Farmers were willing sellers at 10¢ to 15¢ under the gross loan last year.

Summing up

Conclusions. These comments summarize the situation as I now see it:

1—The outstanding thing about soybeans this year is the tremendous supply.

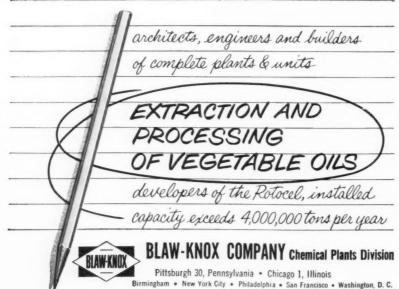
2—Export conditions for fats and oils are favorable. The U. S. policy of selling at world prices has helped to hold production down in competing areas. There is an adequate market for the U. S. surplus over domestic requirements, at prices only a little below those of the current year.

3—It is difficult to estimate what will happen to the price of soybean meal because of the large increase in supply. Indicated prices are below the probable price of corn. It is not likely that soybean meal will sell below corn: \$1.25 a bushel equals 344 a ton.

4—If ever processors are to take a margin for their services, this would seem to be the year.

5—There is no reason to expect a seasonal increase in soybean prices unless they decline under harvest pressure to levels substantially below the loan rate.

6—There is now danger that substantial quantities will be impounded into the loan and that a surplus will develop.



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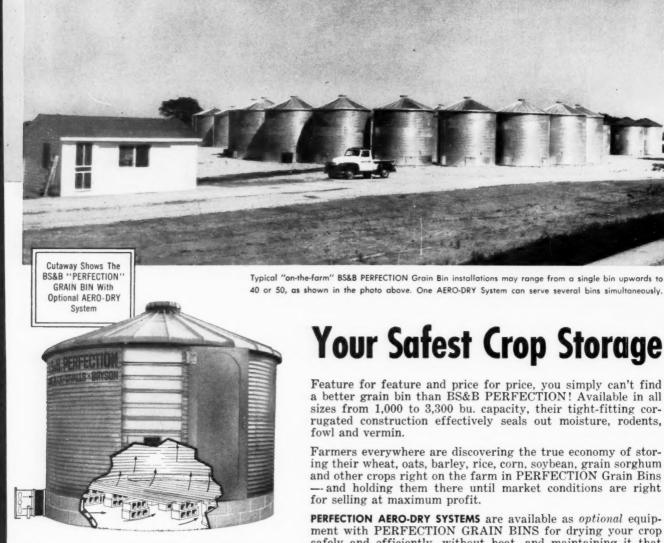


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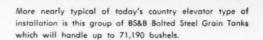


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Factors Affecting Growth of Soybeans

By ROBERT W. HOWELL

Plant Physiologist, Field Crops Research Branch, Agricultural Research Service, U. S. Department of Agriculture

Report on temperatures and phosphorus nutrition studies

GREAT progress has been made in the last 20 years in improving the soybean. Yet, the performance of the crop continues to be greatly influenced by the environment. Two of the most important environmental factors are temperature and mineral nutrition.

Temperature is one of the basic elements of the environment. Soybeans grow best when temperature is in the range of 75° to 90°. Our data show successive increases in height as temperatures are increased from 60° to 75° to 90°. Dry weight is about the same at 75° and 90° but much higher at either than at 60°. Growth is affected more by day than by night temperatures. Under controlled conditions, most growth resulted when day and night temperatures were at the same level.

The chemistry of developing seed is very responsive to temperature. Oil content is positively correlated with temperature. With temperature controlled at 85° we have obtained about 2% to 3% more oil than at 70° (Figure 1), but raising the temperature to 90° has given no further increase in oil. The sensitivity of the oil manufacturing system to temperature is greatest about 3 to 6 weeks before maturity.

Temperature extremes are of importance in limiting growth of the plant, and thus are frequently of more interest to the grower than variations within a normal range. Growth is greatly reduced by temperatures above 100°. Height, number of nodes, fresh and dry weight all decrease at such high temperatures. This is probably due to a more rapid burning of food materials in respiration and to a reduction in the efficiency of photosynthesis.

Reproductive as well as vegetative growth is adversely affected by temperature extremes. The most pods are set at temperatures between 80° and 90°. At 97° there is a definite reduction in pod set and at 105° very few pods are set. This is consistent with observations of many growers that growth and pod set are poor during very hot weather.

Mineral nutrition is another basic environmental factor. The present discussion will be concerned mainly with phosphorus nutrition. All essential elements are important and it is doubtful whether any should be called more important than the others. Yet phosphorus occupies a unique roll in metabolism by functioning as an energy transfer vehicle. Phosphorus atoms can be bound to sugars and sugar derivatives in various ways. In some forms, the bonds holding phosphorus have much higher energy than in others. Thus energy can be concentrated by the formation of such "high-energy" bonds. Breaking these "high-energy" bonds releases energy for utilization in building other chemical materials. By concentrating energy in "highenergy" bonds and combining energy-requiring reactions with the breaking of these bonds, cells are able to build all of the various classes of materials required for life, including oils and proteins, both of which have higher energy content than the carbohydrates which are the raw materials.

Effect of Phosphorus

It is not surprising then, that phosphorus level affects growth and yield of the plant, chemical composition of the seed, and the nutrition of

¹ Publication No. 283 of the U. S. Regional Soybean Laboratory.

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other fertility elements. Size of the plant as measured by height, number of nodes or yield are all increased by added increments of phosphorus. Oil percentage is also sharply increased, at least over the lower levels of phosphorus.

In view of these facts, it might be asked why soybeans do not respond more definitely to field applications of phosphate. They undoubtedly would in areas where soil phosphate deficiencies exist. The data show that optimum yield and oil responses of Lincoln and Illini varieties are obtained at fairly low levels of phosphorus (Figure 2). That other varieties may be capable of responding to higher levels is suggested by the performance of Chief. This variety continues to give increased growth, yie!d and oil content (Figure 3) with phosphorus levels 20 or 30 times that which is optimum for Lincoln. Thus phosphorus response may be limited in many of our varieties by genetic factors. We are now preparing to study this possibility on a number of lines related to Chief. At and below optimum phosphorus supply levels, Lincoln is superior to Chief and Illini and this is correlated with superior "foraging" ability for phosporus. Lincoln takes up more phosphorus than Chief and Illini within concentration ranges beneficial to Lincoln.

The relation of phosphorus level to energy status is illustrated by data on oil quality presented in Table 1. An increase in supply from

TABLE 1. EFFECT OF PHOSPHORUS ON OIL QUALITY

	P4.5	P10
	(% in the oil	
Linolenic Acid	7.31	6.76
Linoleic Acid	52.22	50.43
Oleic Acid	23.83	27.79
Iodine Number	135.3	134.2

4.5 to 10 ppm gives little or no average effect on oil or yield. Yet it causes a reduction in linolenic and linoleic acids, which contribute most of the unsaturation, and an increase

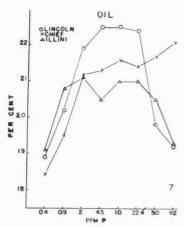


Figure 1. Effect of temperature on oil content of soybean seed.

in oleic, the most saturated of the unsaturated fatty acids in soybean oil. Since the energy content of oil is directly related to the degree of hydrogenation or saturation, this change represents an increase in energy content resulting from a higher level of phosphorus supply.

Phosphorus affects the uptake and distribution within the plant of other nutrient elements. For a given potassium level, increased phosphorus results in increased potassium uptake and a larger proportion in the vegetative portions of the plant (Table 2).

TABLE 2. POTASSIUM DISTRIBUTION IN SOYBEANS AS AFFECTED BY PHOSPHORUS AND POTASSIUM LEVEL

P concn.				o D.W.		
mg/1	5	eed	8c h	ulls	Roo	ois
3,	K10	K50	K10	K50	K10	K50
2	2.0	2.0	.76	2.5	1.1	2.3
10	2.1	2.4	.74	2.9	1.6	3.8

This can result in larger plants which in turn are capable of higher seed yields. This is consistent with observations in Missouri and Illinois on the effects of phosphate fertilizer applications. Phosphating has led to greater uptake of potassium, utimately resulting in potash deficiencies.

Phosphorus affects sulfur nutrition in a similar manner. In fact, over a wide range of sulfur levels, phosphorus level affects the uptake of sulfur more than the sulfur level. As in the case of potassium, uptake of sulfur and the proportion in the vegetative portions is increased by higher phosphorus. Thus it is probable that this is a general effect of phosphorus on the nutrition of other elements.

Plants grown in nutrient solutions on very low phosphorus levels quickly develop characteristic leaf symtoms, illustrated in Figure 4. The interveinal areas fade to a light green and if phosphorus is not supplied, these areas die within a few days.

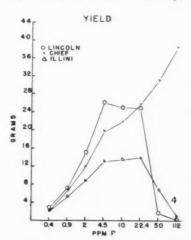


Figure 2. Yield of soybean varieties as influenced by phosphorus level in nutrient solution.



Figure 4. Interveinal necrotic areas resulting from phosphorus deficiency. Additional phosphorus enabled upper leaves to grow normally.

The condition begins on the lower leaves and extends rapidly upward. It has not been possible to obtain recovery of affected leaves after appearance of the symptoms, but spread of the symptoms to higher leaves can be prevented by addition of phosphorus.

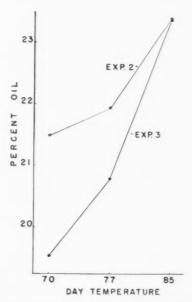


Figure 3. Oil content of soybean varieties as influenced by phosphorus level in nutrient solution.

The Harvesting of Soybeans

Ridging and low pods are serious

problems to contend with in combining

By D. C. HEITSHU

Chief Engineer, John Deere Harvester Works, East Moline, III.

IF LONG acquaintance with a problem makes one an expert, then possibly I may qualify as a discusser of soybean harvesting. Soybeans first became a problem to me in the late twenties when I was a "damnyankee" agricultural engineer on the Virginia Agricultural Experiment Station staff.

When I first knew soybean harvesting the mower and the binder were still very much in the picture with their staggering losses of beans. Some special harvesters were being built that flailed the beans into a hopper. This was somewhat better than cutting and threshing, but the losses still were too high.

Several Virginia farmers were experimenting with units of their own construction that approximated an abbreviated combine. One machine, that I recall, was made on an old binder frame with the canvases turned 90°, feeding the beans into a wooden paddlewheel cylinder. Behind this was a crude cleaning shoe which emptied the beans into a box or hopper under the elementary separator. This man had the forerunner of the straight-through small combine that became popular in the thirties and today harvests a sizable portion of our soybean crop. Incidentally this crude farmer-built combine did a pretty fair job of harvesting beans.

A 9-foot-cut combine was loaned to the Virginia Agricultural Experiment Station for field studies, and I was introduced officially to the combine method of harvesting soybeans. In spite of the many difficulties encountered, the work of the combine was phenomenal. Previous to the arrival and use of the combine practically everyone thought we were damn liars, to put it bluntly, when we estimated the yield in a field of beans. With the combine we started to get enough beans out of the field to make our estimates look sound,

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and the farmers began to realize just how many beans they were losing.

The first combines lacked many things that make the present day combine the efficient soybean harvester that it is.

Spike tooth cylinders in the early combines broke up the stems of the bean plant and loaded the shoe. From these broken stems the joints usually were of the correct size and weight to pass through the shoe with the beans. This lowered the sample. Today the rasp or flail bar cylinder pretty generally has replaced the spike tooth cylinder and a cleaner sample is the result. This is brought about because these cylinders do not mutilate the stems to the extent that the spike tooth cylinder does. In addition, the problem of tooth spacing, blanks, etc., that goes along with the spike tooth cylinder does not harrass the busy operator. The rasp bar cylinder is quickly and easily adjusted to do an excellent threshing job.

Cylinder Speeds

Proper cylinder speeds were not available. The first machines operating in Virginia had to have special drives to get the cylinder speed low enough to provide a suitable sample. The cracks and splits were way beyond an acceptable figure. Since then it has become regular practice to supply the correct cylinder speeds for soybeans. On many small combines the cylinder speed can be set by merely turning a crank. The straight-through machines are quite sensitive to cylinder speed, while converged separators appear to respond quicker to the opening between the cylinder bars and the concave. This difference in reaction to adjustments of the cylinder for better threshing most likely is due to the relative thickness of the layer of material passing between the cylinder and the concave.

Getting the beans onto the header platform, and from there into the cylinder was something of a chore on the early soybean combines. Many times it required an extra man with a broom to get the job done. Dividers, reels, guard angle, canvases, Jackson feeders, and other items caused early operators many headaches. Today's combines have pretty well dis-

carded canvases in favor of the allmetal auger and conveyor. Force feeding to the cylinder is common, thereby eliminating all the problems of the Jackson feeder. Reels, dividers, and guards have been improved so that the answer is available for almost any condition. We will not claim "all conditions," because there is always the odd one that shows up without announcement.

After threshing the beans, there remained the job of getting rid of the vines. If we tried to spread them, the straw spreaders wrapped and wrapped. But if allowed to fall in a windrow the task of working the vegetation into the soil was a never ending one, regardless of the equipment used. This struggle went on for quite a few years until the straw chopper came into use. The straw chopper is rapidly becoming standard equipment on combines harvesting soybeans. Viewed from the performance angle it is easy to see why the farmer is specifying a straw chopper on his soybean combine. It is a real moneymaker because of the reduction in land preparation time following the soybean crop, not to mention the absence of winding and wrapping while com-

Today's combines are efficient units mechanically and functionally. The current machines perform so well that only minor improvements are practical in view of their cost. Unless an improvement earns the purchaser some money it is not an improvement, merely a gadget. Changes can be made, but changes for the sake of change are not a policy of this industry. We leave that kind of thing to our automotive friends in Detroit, and to the dressmakers. Automobiles and dresses are changed for the joy of a new model, while we make changes to be better.

In the harvesting of soybeans at the present time, the overall efficiency of the operation is limited by two factors: (1) the nature of growth of the bean; and (2) the agronomic practices followed in raising the crop.

So long as the soybean fruits down to the ground level there is little opportunity of harvesting all of the beans efficiently. While a cutting mechanism can be made that would operate under the surface of the ground, the first cost and the upkeep cost would make the arrangement impractical for the farmer. He is better off financially to leave some beans on the stalks in the field. All of us in the farm implement industry enter a strong plea for the plant breeder to get the soybean up out of the dirt. If that is done we will save those low beans which are now lost. Moreover, there will be less wear and tear on the combine, and on the combine operator.

Ridges Troublesome

Of the various agronomic practices that are met with, the one of high ridging or hilling is the most serious one to contend with in the combining of beans. The cutter bar of the combine is gaged by wheels running in the row middle, or approximately so, and this area in many conditions is in very poor relationship to the row of beans on the hill or ridge. The higher the ridge the poorer the relationship. Keeping the hills to the minimum required height will assist materially in reducing bean losses. Again, if the plant breeder can eliminate low fruiting the crop losses will be reduced. The engineer can design individual row units that are gaged from the row, but I am certain that the farmer cannot afford a combine with that detail of

The plant breeder and the agronomist have literally "done wonders" in reducing the grain losses in the harvesting of our corn crop. These same men, working with the engineers of our industry, can perform the same kind of a miracle for the soybean. A little encouragement may be all these men need to go to work.

So much for the present harvesting of soybeans. The combine today is an efficient harvester working well under many and varied conditions. However, we can increase its efficiency by improving the operating conditions under which the combine must work. Such improvement must be a cooperative venture with the implement engineer working in conjunction with the plant breeder and agronomist.

For the future it is hard to tell what may take place. There are too many factors involved to do more than hazard a guess. Any one of several factors can change what may be said here within a very short period of time.

The components of the combine have reached a state of stability, therefore no radical changes are expected. However it is safe to say that the agricultural engineers will find ways to improve the combine in durability, efficiency, adaptability, and ease of operation. All of these changes will be minor because there appears to be no miracles in the offing.

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able, but by careful study, design, and testing the relatively rapid wearing parts will be improved to give longer life, and therefore less trouble during harvest time because of breakage and wear. Bearings will be sealed better to run longer, and lubrication will be less of a chore on a daily basis, although more time may be required to properly prepare the combine for its season's run. Chains and belts may be expected to run longer as more and more is learned of the exact requirements that must be met by each drive.

Improving the efficiency of the combine will take two forms. In one the efficiency of the components of the combine will be changed to do more efficient work, while in the other the improvement will result from simplification of the machine so that adjustments are less critical, or from finding ways of indicating proper adjustments in an unfailing manner. While today's combines are easy to adjust, they are still no better than their operators. The goal is to have a machine that anyone may operate at top efficiency and know that he is getting that efficiency.

Farmers growing soybeans only are rare. Practically every farmer has a diversified program for his farm. As a result he is interested in producing his variety of crops with the minimum of equipment. The combine fits this picture rather well. Today the combine can harvest the farmer's small grain, his soybeans, and his corn, as well as the clover, grass or other fine seeds grown. Indeed the combine is capable of handling just about every seed crop known.

Universal Harvester

Our company became interested in harvesting corn with a combine several years ago. Experimental work indicated that the combine could harvest corn satisfactorily, hence with the arrival of the model "45" combine we introduced the corn header. This idea is catching on rapidly, so that it is natural to expect the combine in the future to be the universal grain and seed harvester.

In the term "ease of operation" I am thinking of simplified adjustments. Today too much depends on the operator's experience, judgment, and keenness of observation. In the future we may reach the point where to thresh soybeans the operator will press a button marked "soybeans" and he will be all set to go. That stage of development

must be some distance off. Too many variables are involved for that kind of thing to work in the near future. However, it is expected that the number of adjustments can be reduced, their working made more obvious, and in many cases improved to the point that a fixed setting may be used for certain conditions. We have come a long way in simplifying the combine adjustments, and more of this may be expected.

Leaving the combine itself and looking at its method of locomotion, it seems safe to say that we will see more and more self propulsion. The reduction in small farms, machine rental, custom operators, etc., all point to the greater use of the self-propelled combine. There is nothing to indicate a change in this trend.

Considerable development and experimental work has been done on an all-purpose self-propelling power unit which has a combine attachment among other implements proposed for this special tractor. Unless ways can be found to reduce the compromises that must be made in such combinations, it appears that this type of combine and propelling unit may take care of special farm conditions only. It would seem that the average normal setup may continue to favor the conventional self-propelled combine with the minimum of compromise. This in the future guess is made in light of the greater adaptability of late combines, and the trend toward larger farms, more streamlined farm operations, machine rental, etc.

Combine design is not static, and to illustrate this I want to point out some of the work going on in our country. At Ames, Iowa, the centrifugal separation method is being explored. This development is being watched carefully by the industry. Out in California a group of investors are backing the development of a unit known as the "Harvestaire." This combine uses a pneumatic-centrifugal principal, and it may open some new avenues. However, I would not suggest that any prospective purchasers hold up their orders while the industry devises a new threshing and separating concept.

You may be assured that if the industry can find a better way to harvest your soybean crop than is possible with the present combine this machine will be offered to you with all practical speed. We are interested in advancement, but only when we are certain of giving our customers a more profitable unit to operate on their farms. Until the revolutionary harvesting system arrives, you may expect to get better and better, and still better, combines to use in the harvesting of the fabulous soybean.

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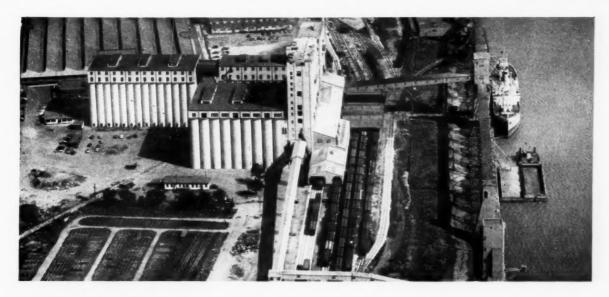


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Sixty Years of Soybeans in Illinois

A review of the history since 1896 in the nation's leading soybean state

By W. L. BURLISON
Professor of Agronomy, Emeritus
University of Illinois

SHORT while ago a brochure came from a leading university in which was described 50 years of graduate work at that great institution. I was struck at first by the absence of names of persons who had served in that school for years as teachers. I soon discovered that the list of names would be long and would require much space. This seems to account for names being omitted. We have reached about the same place here in our soybean research program. We now refer to our work by agencies or departments rather than by individuals. This story, however brief, could not be fairly told without mentioning certain persons.

At this point I want to pay special tribute to three of my colleagues, namely, Professors Hackleman, Woodworth, and Sears. It has been a source of great satisfaction to me that I had a part in persuading them to come to Illinois. Each has developed distinguished careers in the field of soybean improvement, management and production. Another name should be mentioned here—that of W. J. Morse. For many years he has been a staunch supporter and

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adviser in whatever this state has done in soybean production.

The soybean story in Illinois is a rather remarkable piece of history and is recognized as such in many parts of the world. "How did it happen?" is the question asked more often than any other. A quotation from former President Hoover gives us one good answer. I quote, "Discovery and invention do not spring full grown from the brains of men. The labor of a host of men, great laboratories, long patient scientific experiments build up the structure of knowledge, not stone by stone, but particle by particle. This adding of fact to fact some day brings forth a revolutionary discovery, illuminating hypothesis, a great generalization of a great practical invention." The soybean evolution or revolution has taken place in just such a fashion. This is how it happened. There have been many forces at work.

The Soybean Beginning

So far as our records are available, the earliest work on soybeans was published in Bulletin No. 43, and released in 1896, by the Illinois Agricultural Experiment Station. This bulletin was prepared by C. G. Hopkins who was then chemist of the Illinois Agricultural Experiment Station. The date of 1896 marks the beginning of a study of the soybean.

"Research gives the fact basis for clear thinking and right acting." If this statement is true, which I believe it is, research has been one primary factor in the great progress of soybeans in Illinois.

In a study of crops like the soybean, the research programs begin usually with its agronomic requirements such as soils, climate, diseases, insects, genetic behavior, etc. This was the original plan at Illinois and this scheme has been continued throughout the intervening years in cooperation with various departments and agencies.

Circular No. 5 published in December 1897 entitled, "The Cowpea and Soybeans," was the first strictly agronomic article issued by the Illinois Station almost 60 years ago.

Research on soybeans was continued but publications on this crop were slowed down until 1917 when Bulletin 198 with the title, "Soybeans and Cowpeas," was printed. In June 1928 followed Bulletin 310 with the title, "Soybean Production in Illinois," a most comprehensive publication dealing with nearly all phases of soybean management in this wide area. This bulletin, after almost a third of a century, enjoys a wide interest. Very shortly after, Bulletin 384, "Genetic and Breeding in the Improvement of the Soybean," came from the press in 1932. This bulletin is considered a classic today.

Publications are important, but certain byproducts come directly from research: For example, as new varieties of soybeans such as the Illini, developed here and distributed in 1927, followed by the Chief, Viking, and Lincoln. J. L. Cartter will tell us more about new varieties developed by the Regional Soybean Laboratory and the cooperating experiment stations during more recent years.

Bulletin 462, "Eleven Years of Soybean Investigations," shed further light on subjects covered in earlier publications with reference to seeding, ageing in seed and storage.

Bulletin 456, "Soybeans—Their Effect on Soil Productivity," has added much new information on this subject. It still remains high on the list of widely read reports. Our soils people have been working on the



TRIBUTE was paid by Burlison to O. W. Woodworth, plant breeder, and J. C. Hackleman, extension agronomist, at the annual ASA banquet. Burlison said he had a part in persuading both men to come to Illinois. Both retired Sept. 1.

soybean fertility problem for a long time, but there remains much to be done. After hearing a discussion of the Advisory Council yesterday, I am sure it will not be long before this ugly question will be solved. It is a top priority problem in most of the Cornbelt agronomy departments. The struggle for a solution is on.

Bulletin 386, "Supply and Marketing of Soybeans," is a joint publication between agronomy and agricultural economics. In the foreword to this bulletin the late Dean Mumford had this to say, "Few products of the farm have increased in economic importance so rapidly as have soybeans. This growing interest has been reflected in the attention that has been given to the various aspects of the crop by the Agricultural Experiment Station of our University. Its place in the cropping system has all been under study for some years.

"The purpose of the bulletin is to examine the supply situation with respect to both soybeans and soybean products, the present and potential markets for soybeans, the means and methods by which they are marketed, their economic characteristics in relation to improvement in marketing and their influence of various factors on the price paid for them."

Other Departments Cooperate Fully

Although agronomy has been working on soybeans longer than other departments in our College, they have contributed greatly in the development of soybeans in our state. These departments are:

- 1—Agricultural economics.
- 2—Agricultural engineering.
- 3—Animal science.
- 4—Dairy science.
- 5-Food technology.
- 6—Horticulture.
- 7—Home economics.

Each of these departments has in-



THIRD member of the group whom Burlison helped persuade to come to Illinois, O. H. Sears, tolked on inoculation of soybeans, a favorite subject, during the field day.

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dicated representative types of research on soybeans which have been of specific importance in helping to bring the soybean crop to where it is today.

AGRICULTURAL ECONOMICS: The program of soybean research in this field covered a wide range and has contributed significantly in understanding the complex problems of marketing soybean products. Beginning in 1925 and continuing to date, a period of 31 years, soybeans have been included in some project 29 times. In addition, soybeans have been mentioned in an important sense 30 more times.

Agricultural Economics carries a substantial graduate teaching program. Since 1925, nine masters degrees have been given with soybeans being considered one way or another in the thesis. In recent years the Department has granted seven Ph. D. degrees in which the soybean is a vital part of the study. This program speaks well for the place soybeans have in Agricultural Economics.

AGRICULTURAL ENGINEER-

ING: This department has for a long time included vital research projects on soybeans, but the two most important in Agricultural Engineering are (1) studies on the operation of the combine, and (2) storage.

Combine-Agricultural Engineer-

ing has contributed substantially to the improvement and management of the combine as a useful instrument for harvesting soybeans. About 5 bushels per acre have been added to the yield by the steady good work on the combine. This type of study was begun in 1923. Cooperation among agricultural engineers, industry and farmers has produced a machine which has largely solved the soybean harvesting problem.

Storage—Soybean storage has been an outstanding research project in Agricultural Engineering since 1943. The project is a cooperative undertaking, including the Illinois Agricultural Engineering Department, Illinois Natural History Survey, and the USDA. Results of this study have been published as Bulletin 553 of the Illinois Agricultural Experiment Station. Any person who is a producer or a processor should be acquainted with this publication. For a long time its contents will be up-to-date and good reading.

ANIMAL SCIENCE: While on a visit with Dr. L. E. Card, head of our department of Animal Science, about our soybean program, I asked him what was the most significant thing Illinois had done for soybeans during these many years. He thought a moment and then said, "I think probably the most important thing is that we have helped the state to

realize the great quality and potential of the crop. And, as we scan letters from many lands dealing with the soybean, we have added proof that this is true."

Animal Science, year by year, has done its full share to bring about an understanding of the place of soybeans in our agriculture. Take a period in Animal Science from 1923 to 1933—there is no single year in which some vital project on certain soybean products was not in operation. I think this would be true for any year since soybeans became a promising crop. All of us recall the splendid work done on how to get best results on feeding soybeans and soybean products to swine and beef cattle.

DAIRY SCIENCE: Dairy Science has been investigating the value of soybeans as a forage with success for some time. The results of this study on. "Sorghum and Soybeans for Milk Production," are published in Bulletin 578 issued in 1954. Another Bulletin 529, "Legumes and Grasses for Silage," is typical of how the soybean is being studied from many angles.

A number of highly technical projects along the line of nutrition and reproduction involving soybeans are being actively studied. "The Effect of Feeding the Soybean Plant or Its Fractions Upon Reproduction, Growth, Lactation, and Aging in

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THE TRADE NEWS SERVICE

24 Stone Street New York 4, N. Y. Dairy Cattle" is very basic in nature and also intensely practical in promise.

FOOD TECHNOLOGY: Studies on using soybean products in combination with dairy products have been made by Dairy Husbandry. Before 1937 formulas were developed by including both soy protein and soybean oil in frozen desserts. At a meeting of the American Soybean Association held here in 1937 a sherbet containing soybean protein was served to the Association. The body texture and other properties of these soy products were quite satisfactory, but the critical taste testers of the Dairy Technology Division were not satisfied with the taste whenever a small percent of soy products was used. The frozen products made with soybean oil could be regarded as the forerunner of the "mellorine-base" products now extensively sold in many areas for frozen desserts.

In a study made by Dr. Tracy during the war emergency, he showed the possibilities of producing a desirable processed cheese by combining ripened cheddar cheese and lowfat soybean flour. As much as 30% of the cheese solids could be replaced in this manner without serious change of either the flavor or body of the finished product.

Attempts to make a beverage from soybean flour have not been successful because of the bean flavor. Once this difficulty is overcome, the opportunity to increase the uses of sovbeans as to human food are un-

HORTICULTURE: At one time there was considerable interest in edible soybeans, but this interest has declined to some extent. The Department of Horticulture has published two bulletins on the behavior of edible beans: The first 453, "Eighteen Varieties of Edible Soybeans," and a second 471, "Range of Adaptation of Certain Varieties of Vegetable Types of Soybeans." When the vegetables come back, there will be good material for a foundation for future research in this field. Of course, Home Economics cooperated in these studies.

HOME ECONOMICS: Work on soybeans and soybean products as human food was launched in 1930 and has continued to date. The present program is under the direction of Dr. Frances O. VanDuyne. The earlier plan has been modified and greatly strengthened to include the following: 1. Continuation of studies on the proximate composition of green and dry soybeans; II. Rating of green and dry soybeans; III. Complex carbohydrates in green and mature sovbeans; IV. Microscopic work on soybeans; V. Soy flours-high, minimum-fat from different

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sources; VI. Preservation of green beans; VII. Soybean sprouts; VIII. Composition of fresh, frozen and stored, and canned and stored green beans; IX. Thiamine content of soybeans. This, to say the least, is a comprehensive research program.

A very large list of bulletins, circulars, journal articles, and mimeographs have come from our Home Economics laboratories.

This paper has only touched upon our soybean research program. A number of unusual things are being done or have been done. I would not like to overlook the following item. Just 25 years ago, our College of Engineering issued Bulletin 235 entitled, "An Investigation of the Suitability of Soybean Oil for Core Oil."

extension effective: Research is vital, but equally vital is a vigorous and determined extension program. Our soybean extension program has been both vigorous and determined under Professor J. C. Hackleman's direction since 1920, a period of 36 years. He held three demonstrations the first year. By 1925, 28 counties had put out demonstrational plots; from here on—year in and year out—seeing soybeans in

the field was a crusade for soybean improvement.

In 1922, 50 bushels of a pure selection of Manchu was distributed and at the end of 1927, about 65% of our commercial soybean areas were in this variety. Varieties of soybeans have come and gone, but always a steady improvement in progress. Not a season since 1922 has a year passed without our feeling keenly the impact of the soybean extension program.

American Soybean Association

The first movement to organize soybean interests in America dates back to Sept. 3, 1920, at the Fouts Bros. farm in Indiana. This meeting was held under the auspices of Purdue extension department for the purpose of acquainting Cornbelt farmers with the virtue of America's new crop. The meeting set in motion a potent force new in soybean history. Here the National Soybean Growers Association was formed. In 1925 a reorganization meeting was held in Chicago at which time the name was changed to the American Soybean Association as we know it today. The Association has had its "ups and downs," but its face has always been to the front, thinking

and acting in the future. This Association can never completely be repaid by Illinois producers for help during many years of rapid growth.

A word now about the Soybean Digest. The Soybean Digest is a child of the American Soybean Association. It has been in the forefront of our struggle for 15 years. It has led the way on numerous fronts and its leadership is growing in many directions. It is exercising a power quite beyond its own field. It is being recognized as a technical and scientific journal of standing. We do wish to salute the Digest for its most effective influence pertaining to a newcomer to our land.

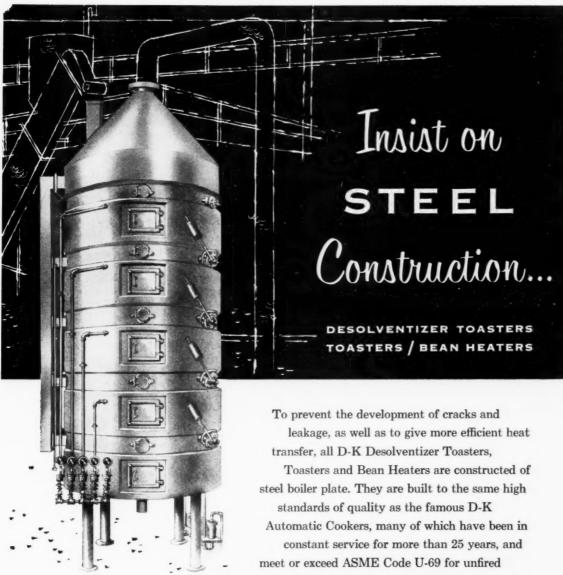
Soybean Processors Association

The National Soybean Processors Association was organized on Apr. 16, 1930, in Chicago. It was explained by the late Mr. H. G. Atwood, of blessed memory, that the purpose of the first session might be termed an effort to realize and make a worthwhile industry from what we now termed "an infant." He then proceeded to take up for discussion the subjects outlined in the original call for the first meeting. The items mentioned remain a part of the activities of the Association. From the day of the first gathering 26 years ago the Association has been a power for good. Of course our soybean program in Illinois has been greatly strengthened by the Processors Association and we now pay tribute to them for their help and encouragement for over a quarter of a century. It was the processors who suggested the conference idea which has meant so much to the entire industry.

Individual members of the Association have been on call in matters pertaining to any phase of the research or extension program. Their most able men have never been too busy to lend a hand. H. G. Atwood assisted us at all times; Adrian Joyce found many ways to be useful; not one was more thoughtful than D. W. McMillen and I. C. Bradley. Ward Calland is always at critical spots "building bridges" here and there which have strengthened our entire industry. Men of Staley's, newspapers, radio, TV, have shared common council with us.

PIONEERS—EARLY — MODERN:
The University of Illinois has always recognized the value of our pioneers on the farm and in industry. Our farm pioneers have contributed much to our progress and always will. We would like to mention the names of early and modern farm pioneers who have done so much for soybeans in this state: J. C. Utter, Frank Hurrelbrink, C. A. Rowe, Ralph and Paschal Allen, C. L. Meharry, John T. Smith, C. H. Outhout, E. D. Funk, Russell Davis,





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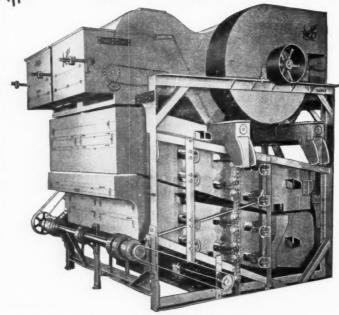
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Loren Wilderman, and W. E. Riegel. Here in my hands is a pamphlet with the title, "Soy or Soya Beans—What They Are, . . . How to Grow Them, and What They Are Good For," presented on Dec. 21, 1898, before the Macoupin County Institute by W. H. Stoddard, Collinsville, Ill. Many things in the booklet are just as good now as then. This was written by a farmer pioneer.

What of Garwood Brothers? In the fall of 1924 Garwood Bros., modern pioneers, used the first combine in Illinois to harvest soybeans. They gambled and won. Faith, hope and patience won. It is interesting that Garwood's had faith, greater than some of our machinery engineers.

These are the types of early and modern pioneers who helped answer the question, "How did it happen?"

Brief Summary

In 1944, Professor Hackleman presented a paper before the Processors' Conference entitled, "Soybeans in Illinois — Review and Preview." This is a summary of six events which have had important influences on the progress of soybeans in Illinois. These are:

- 1. Introduction or creation of new varieties.
- 2. Variety demonstrations.
- 3. Adaptation of the combine to soybean harvesting.
- 4. Development of a commercial market.
- 5. The price guarantee by American Milling Co., Funk Bros. Seed Co., and G. L. F. in 1928.
- 6. Utilization of soybean oil by the paint industry.

Efforts to develop a commercial market for soybeans in 1921 by the Illinois Farm Advisers Association, and soon thereafter, a price guarantee by one of our leading mills, will go down in history as a great step forward in crop marketing. Industrial utilization of soybeans has been challenging but sometimes just a little slow maybe; always exercising a vital influence, but as sure as time it will grow.

As I learn more about our soybean program, it seems to me our research is being accentuated in numerous ways. The use of soybeans in our livestock production program is growing year by year. Of course, our eyes are now more than ever on world markets. The University is expanding its research marketing program, probably the most significant development in recent years.

Finally, it seems to me the finest thing about the soybean industry in Illinois is the steady gaining strength within itself.

Twenty Years of Cooperative Research

Describes varieties introduced by the U. S. Regional Soybean Laboratory



Research Agronomist, Field Crops Research Branch, Agricultural Research Service, U. S. Department of Agriculture.

SOYBEAN production in the United States had risen from 5 million bushels in 1925 to nearly 49 million bushels 10 years later. Such a rapid increase in production of beans naturally created marketing and utilization problems of fundamental importance to the whole soybean in-dustry. As Dr. O. E. May, the first director of the Soybean Laboratory, wrote 20 years ago, at the time of the 16th annual meeting of the American Soybean Association, "It therefore seemed the part of wisdom to a group of thoughtful agricultural authorities to develop and support a coordinated research program which might solve or anticipate these problems and thus assist in placing the soybean industry in all its phases upon a sound and stable basis."

The Bankhead-Jones Act, passed in June 1935, stated as one of its purposes, "The Secretary of Agriculture is authorized and directed to conduct research. . . relating to

Publication No. 284 of the U. S. Regional Soybean Laboratory.



the improvement of the quality of and development of new and improved methods of production of, distribution of, and new and extended uses and markets for agricultural commodities and byproducts. . . ." The U.S. Regional Soybean Laboratory was the third of a number of laboratories established under this act for the purpose of fostering cooperation between the U.S. Department of Agriculture and the state agricultural experiment stations in conducting research on specific crops. At that time we were pioneering in the cooperative development of new soybean varieties for industrial use and also pioneering in a new type of federal-state cooperation itself. Over the years we have learned to take this type of cooperation for granted.

In the present period when we are so actively engaged in the expanding of our export market, it is interesting to recall the words of W. J. Morse in his address before the ASA convention in 1936 when he said, "Since 1931 when American-grown soybeans were first exported to European markets, chiefly to the oil mills of Germany, there has been an open European market to the American farmer. With economical methods of production and high quality beans, America is in a position to



compete for the 50-million-bushel trade in European markets."

The Laboratory was established as a cooperative undertaking between the Bureaus of Chemistry and Soils and Plant Industry of the U.S. Department of Agriculture, and the 12 state agricultural experimental stations of the North-Central region. As a matter of historical interest, the meeting at which the formal cooperative agreement was formulated was held in Chicago, Feb. 7, 1936.

When the Laboratory work was inaugurated in the spring of 1936, the headquarters was established here at the University of Illinois, where adequate laboratory, greenhouse, and office facilities were provided by the University through the active leadership of Dr. W. L. Burlison. In 1942, the work on processing and industrial utilization was transferred to the Northern Regional Research Laboratory at Peoria, Ill. This utilization research was reported in over 130 publications and so will not be reviewed here. In the same year, at the request of the directors of the agricultural experiment stations of the Southern states, the work of the U.S. Regional Soybean Laboratory was expanded to include this region also. Following the reorganization of the Department of Agriculture in 1953, the Soybean

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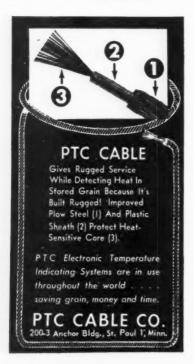
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Project, which includes the Soybean Laboratory, is a part of the forage and range section, field crops research branch, Agriculture Research Service, U. S. Department of Agriculture

Before the initiation of the Laboratory program, the state agricultural experiment stations were working independently in the breeding of new soybean varieties. Establishment of the Laboratory has made possible the broad cooperative program which we have at the present time, with frequent opportunity for exchange of information and plant breeding materials. The agricultural experiment stations of the states comprising the Laboratory region, nominate collaborators who are appointed as an advisory committee with the Laboratory. The collaborator conferences, held once a year, give an opportunity for us to take stock of our research position and modify our program or procedures in accordance with changing needs. It is well recognized that soybean variety adaptation follows rather narrow latitude belts running east and west across several states, making a cooperative approach to the breeding problem very desirable.

Breeding Centers

For several years, there have been cooperative breeding centers at seven locations conducting fundamental genetic studies on soybean improvement. An increase in appropriations 2 years ago made it possible to establish two more, one in Minnesota and one in Florida, so that we can extend our understanding of the behavior of the soybean plant to much



SOYBEAN VARIETIES DEVELOPED COOPERATIVELY BY THE U. S. REGIONAL SOY-BEAN LABORATORY AND STATE AGRICULTURAL EXPERIMENT STATIONS.

		THE STATE MORICOLIONAL	TVI FKIMIFIAI 31	A 110113.
Variety	Maturity Group	Parentage	Originating Station	Year Released
Norchief	0	Flambeau x Hawkeye	Wisconsin	1954
Grant	0	Lincoln x Seneca	Wisconsin	1955
Chippewa	1	L x (L x R)*	Illinois	1954
Renville	1	L x (L x R)*	Minnesota	1952
Monroe	1	Mukden x Mandarin	Ohio	1949
Blackhawk	1	Mukden x Richland	Iowa	1951
Hawkeye	11	Mukden x Richland	lowa	1948
Adams	111	Illini x Dunfield	Iowa	1949
Lincoln	111	Mandarin x Manchu	Illinois	1944
Clark	IV	L x (L x R)*	Illinois	1953
Wabash	IV	Dunfield x Mansoy	Indiana	1949
Perry	IV	Patoka x L37-1355	Indiana	1952
Dorman	V	Dunfield x Arksoy	Mississippi	1952
Lee	VI	S-100 x CNS	Mississippi	1954
Roanoke	VII	Mixed seed lot	North Carolina	1946
Jackson	VII	Volstate x Palmetto	North Carolina	1953
*1 : /1 :-	and a Diele	I		

*Lincoln x (Lincoln x Richland)

wider variations in climate and day length. With our present knowledge of the plant and our excellent cooperative arrangements and facilities, it takes a minimum of about 10 years from the time a cross is made until a new soybean variety can be released for production, involving adequate evaluation of the new variety during several seasons at many locations.

To measure the yield and range of adaptation of the better strains developed through the cooperative breeding program, the Uniform Soybean Tests, as we have come to know them, were initiated in 1938 on a limited basis with only three maturity groups. The work was rapidly expanded until nine maturity groups have now been established. The first five groups include strains of proper maturity for the North Central states and the other four include strains adapted to the Southern states. At present there are over 100 cooperative nursery locations where new varieties are given a thorough evaluation before being recommended for release to producers.

Prior to 1936, farmers were growing many of the older soybean varieties such as Manchu, Dunfield, Illini, Mammoth Yellow, Biloxi, and many other strains produced mainly by selection from plant introductions. In this 21st year of the Laboratory, we can look back on the substantial improvement that has been made in the value of the strains developed through cooperative effort. Yield, maturity, lodging and shattering resistance, seed quality, disease resistance and increased chemical value are among the factors considered in the varietal improvement work

The first soybean variety that was released through the cooperative research program was Lincoln, released in 1944. Rather than discuss the new varieties in the order of their release dates, I believe it would be more satisfactory to discuss them

in order of maturity, as they are listed in the following table:

Varietal Descriptions

The variety **Norchief** is adapted in the central part of Minnesota, the northern part of Wisconsin, and through central Michigan. This is the earliest maturing of the improved soybean varieties that have been developed cooperatively by the Laboratory and the state agricultural experiment stations.

Grant is about four days later than Norchief and is generally adapted a little farther south.

Chippewa, from a backcross Lincoln x (Lincoln x Richland), appears to be a very promising high-yielding variety for southeastern South Dakota, the southern part of Minnesota, northern Iowa, and through south-central Wisconsin. Chippewa may even find a prominent place as far south as the northern tier of counties in Illinois.

Renville is being grown on a substantial acreage in southern Minnesota.

Monroe is well adapted to areas in northern Ohio and is being grown to some extent in Michigan and Wisconsin.

Blackhawk has been responsible for a substantial increase in soybean production in northern Iowa and southern Minnesota, where it has replaced such strains at Habaro, and has materially increased the value of soybeans both to the farmers and processors in that area. Both Monroe and Blackhawk are resistant to the Phytophthora stem and root rot that is causing severe losses on some heavy soil types, especially in northwest Ohio.

Hawkeye, from the same cross as Blackhawk, is the most widely grown of any of the soybean varieties in the North Central states, occupying at present over 40% of the acreage in Illinois and 60% of the acreage in Iowa.

Adams is a little later than Hawkeye and is not grown as far north. Adams is noted for having the highest oil content of all the strains grown in the soybean belt.

Next in order of maturity comes Lincoln which was the first variety released through the Laboratory program. Lincoln is a day or so later than Adams, though they are adapted to about the same general area in southeastern Nebraska, southern Iowa, northern Missouri, and the central parts of Illinois, Indiana, and Ohio. A few years after its release, Lincoln was the most widely grown variety in the United States, but since the subsequent release of other improved strains, the acreage of Lincoln has dropped appreciably. This is to be expected in a continuing program of variety development.

The next variety in order of maturity is Clark, an outstanding strain of Group IV maturity. Clark is adapted through northeastern Kansas, central Missouri, the southern half of Illinois and Indiana, and extending east to southern Pennsylvania.

Wabash and Perry are adapted to the same general area as Clark, but Clark is earlier, usually outyields both of them, and will rapidly replace them as seed stocks become well distributed.

Considering varieties adapted to the Southern states, **Dorman** is about a week later than Perry and perhaps 2 weeks earlier than Ogden. Dorman is best adapted on the heavy clay, Mississippi Delta soils of southeastern Missouri, Arkansas, Mississippi, and northeastern Louisiana. It is also well adapted in the northeastern quarter of Oklahoma, in western Tennessee, and in the Coastal Plain area of Virginia. Dorman is higher in yield and 2% to 3% higher in oil content than S-100, one of the varieties it is replacing.

Lee is similar in plant type to Ogden, but is a few days later, holds its seed better, and is superior in seed yield and seed quality. Lee is the first variety that was selected from a cross made purposely for improving disease resistance. It is resistant to bacterial pustule, wildfire, frogeye, and purple seed stain. In general, Lee is well adapted in the area where Ogden has been grown and is also proving very promising under irrigation in the southern part of California and Arizona, where shattering is an especially important problem.

Roanoke is about a week later than Lee and grows 8 to 10 inches taller. Because of its taller growth, Roanoke is preferable to Lee on lighter soils in southern Alabama and west Florida.

Jackson is the latest maturing of the strains that have been developed through the breeding program, being a day or two later than Roanoke. Jackson is well adapted in the southern part of the Southern states and where best adapted, will outyield Lee. In the Delta area, Jackson yields well but because of its taller growth, it is more difficult to combine than some of the earlier strains such as Lee.

A statement on cooperation in developing new soybean strains would not be complete without recognizing the fine cooperative work of our Canadian neighbors in the exchange of experimental lines.

Harosoy, one of our widely grown northern strains, was developed in Ontario and is playing an important part in our soybean production and breeding programs. One of the important features of the entire cooperative breeding program has been

the free exchange of experimental strains and segregating populations in early generations.

Over the years much of the research effort in all the cooperating states has gone directly toward development of the improved strains that have been released, though fundamental research has not been neglected in the overall program. I would like to give you some of the highlights of this work which has been reported in over 150 research papers.

Diseases are becoming more severe as the acreage concentration of soybeans increases, as has been experienced with many other crops. Recognizing that a vast amount of groundwork on the epidemiology of



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soybean diseases was necessary for a sound breeding program, the Soybean Project increased its cooperative soybean disease research program in 1943 so that at most of the breeding centers there are pathologists working with the plant breeders as a team in solving some of the more urgent disease problems facing the soybean crop.

A germ plasm bank has been established at Urbana, Ill., for the preservation and evaluation of all the northern soybean strains and at Stoneville, Miss., for all of the southern strains where we maintain a total of about 4,000 varieties and introductions from all parts of the world. The collection is being added to continually. As pathologists develop methods of evaluating strains for resistance to a disease, breeders make a careful search in this bank for resistant types to use in crosses. The immense value of the germ plasm collection may not be fully realized for many years to come.

All desirable characters are usually not found together in any one variety, and are not usually expressed to the highest degree in the strain in which they occur, thus making improvement by hybridization and selection necessary. Inheritance studies at several locations have given us much basic information on the degree of association between many of the quantitatively inherited characters like yield and height, and yield and maturity, from which we can develop selection indexes involving these characters. A better understanding of the association between characters enables the plant breeder to make more rapid progress in selecting for improved types.

Oil content has been one of the important selection factors considered in the development of new

strains. The chemical section at the Laboratory headquarters is currently analyzing around 20,000 soybean samples a year for oil and protein content as a service to the cooperative breeding program, making possible the greater emphasis on chemical quality in the breeding of new varieties. Much research has gone into the development of improving methods of analysis to expand our chemical quality studies.

Cultural methods are important to the grower as they affect the economy of soybean production. The soybean breeder is also concerned with such factors as planting date, plot size, seeding rate, effects of competition, row width, weed control and harvesting methods as they affect the evaluation of experimental lines under test. Several intensive studies have been carried out to improve variety testing procedures as well as supply information for economical soybean production.

Much research has gone into weed control studies, studies on the physiology of weed competition, and the measurement of the damage caused by various degrees of weed infestation.

I have touched on only a few of the studies undertaken, most of which have served to open up new problems that need attention.

We must increase our basic understanding of the genetics and physiology of the soybean plant to continue rapid progress in breeding. We especially need information on the physiology of expression of genetic characters in order to most effectively apply results from all of our research to the breeding of superior varieties.

We are striving to improve the chemical quality of the oil and protein from soybean seed. Higher linoleic acid content in soybean oil would make it more valuable for industrial applications and lower linolenic acid is desired in a food oil. Recently we have developed a rapid method of determining the fatty acid content in soybean oil, now making possible the inclusion of this factor in the breeding program. Limited search in the germ plasm collection has already located a few strains low in linolenic acid which can be used as parents in inheritance studies on this character.

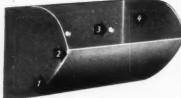
We are also increasing the accuracy of some of the methods for studying protein quality in the soybean, and are confident that the breeding for larger quantities of certain of the essential amino acids, including methionine, lies just around the corner. Progenies from certain parents are consistently higher than from others in methionine, giving us definite encouragement for progress in this investigation.

A study at many locations is now under way to measure the rate of mutations induced by x-rays and thermo-neutron radiation. The approach to the problem of inducing favorable mutations may prove especially valuable in obtaining strains resistant to some of the serious diseases for which so far no resistance has been found in the germ plasm bank. As a part of the study, over 3,000 isolates from irradiated material are being evaluated this season in the search for brown stem rot resistance. We are measuring the effect of certain growth regulators or hormone-like substances on growth and composition of the soybean, especially with reference to controlling diseases, improving seed set, increasing yield or the physiological efficiency of the plant, and inducing favorable changes in seed composition. This field of investigation is just opening up and the possibilities are very challenging.

I have touched on only a few of the fundamental research projects that are being carried on by the Laboratory and the cooperating experiment stations in the coordinated effort that is being made to develop soybean varieties that will give the farmer a higher yield per acre or lower production cost, and the processor a raw material to work with that will be of higher quality and increased value for food, feed, and industrial products.

The need for pioneering work is as great as it ever was. Soybean research has paid very substantial dividends in the past and we have reason to feel that in the future it will continue to give a good return on the investment. We appreciate the counsel and guidance that the soybean producers and processors have given the crop research men in the past and we solicit your continued constructive criticism in the next round of varietal improvement.

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Progress in Soybean Research

Reports on research work on both soybean meal and oil by Northern Utilization Research Branch

By L. L. McKINNEY

Northern Utilization Research Branch, Agricultural Research Service, U.S. Department of Agriculture, Peoria, III.

AST YEAR Dr. J. C. Cowan, head of the Oilseeds Section at the Northern Utilization Research Branch, talked to you about the "Need for Research on Soybean Oil Meal" and pointed out some of the gaps in our knowledge of the composition of soybean oil meal. This article was published in the April and May issues of the Soybean Digest (1) and it is hoped that it will stimulate interest in learning more about the chemical composition of the meal for more effective utilization in balanced feeds. We have initiated compositional studies, insofar as our limited budget will allow, to investigate the alleged antithiamin factor, the non-protein nitrogen fraction, the phosphorus-containing compounds (phytin and nucleic acids), and to carry out fundamental studies on the proteins and their amino acid composition.

This year I shall report on recent progress in some of our research on soybeans which includes the development of methods for measuring urease in toasted and raw soybean oil meals, the use of the hemaglutinating test to correlate the degree of toasting with the nutritive value of soybean oil meals, the development of a flash desolventizer for producing undenatured soybean meal products for industrial applications, and the development of vinyl ether derivatives of soybean oil fatty alcohols for use in protective coatings.

Norelac

I would like to briefly review the history of Norelac to illustrate the increased utilization that can stem from a laboratory development. In 1944, Dr. O. E. May, then director of the Northern Laboratory, reported to you (2) on a new type of resin developed from soybean oil by Dr. J. C. Cowan, H. M. Teeter, and others. In 1946, Dr. G. E. Hilbert, then director of the Laboratory, reported to you (3) that the laboratory work on this resin had been completed and that it showed promise as a protective coating and as a heat-sealing and moisture-proofing agent. In 1947, Dr. Hilbert reported (4) that General Mills, Inc., had begun full-scale commercial production of this resin in a new

plant having a capacity of 100,000 pounds per month.

In 1953, General Mills announced (5a) the discovery of a new resin produced by combining Norelac-type resins with epoxy resins to give a product with unique properties. This new resin has found uses in protective and decorative coatings, castings, adhesives, and for making plastic tools and dies for the manufacture of aircraft and automotive parts (5b).

In December 1953, U.S. Patent 2,663,469 was issued to W. B. Winkler on the use of polyamide resins (Norelac), manufactured by General Mills for use in producing "gelled" paints which become liquid on brushing or rolling. At present over 30 companies are manufacturing these gelled paints in the United States and sales and manufacture have been initiated in several foreign countries. Further expansion in the use of these gelled paints is expected, and it may be a considerable factor in retaining markets for domestic drying oils which have been receiving greater and greater competition from synthetics.

Urease Activity

At the suggestion of the Soybean Research Council of the National

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In 1925, the production of soybeans in Ohio was 434,000 bushels, Indiana 2,114,000, and Illinois 6,970,000—a total for the three states of 9,518,000 bushels.

In 1955, the same three states produced: Ohio 30,725,000 bushels, Indiana 43,602,000 bushels, Illinois 100,510,000 bushels—a total of 174,837,000 bushels.

A phenomenal growth in just thirty years. That's why there are 58 soybean processing plants in these three states.

In 1955, 31.6% of the entire United States crop was grown within 25 miles of the Nickel Plate Road.

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The HANCE "100" cleans beans and grains at the rate of 100 to 250 bushels per hour, depending on the type of cleaning job desired. It is also an excellent cleaner for processing clover and other seeds at the rate of 20 to 30 bushels per hour.

The cleaner illustrated is equipped with a charging elevator and a treater-bagger, making a compact unit with a single motor drive (1 H.P. required).

The HANCE "100" can be operated on casters without bracing or as a stationary unit. Caster mounting permits the cleaner to be moved from bin to bin readily.

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Soybean Processors Association we carried out investigations to determine the relative merits of the available tests for measuring urease activity and made recommendations for improvements of the testing procedures (6, 7).

The urease test is used to determine whether the degree of toasting of soybean oil meal is adequate to develop its maximum nutritive value and whether the urease activity has been sufficiently destroyed to allow the addition of urea in formulating ruminant feed. Since 99.5 to 99.95% of the original urease activity has been destroyed in properly toasted meals, the problem is to find a test

that is sufficiently sensitive to differentiate toasted meals which contain this residual activity. Figure 1 shows the effect of temperature on the activity of meals as measured by the pH-change or modified Caskey-Knapp method, and Figure 2 shows the same effect for the titration method. The series of samples represented by the different curves was selected from a group of commercial meals to give a wide range of urease activities. They had been rated by several processors, using their presently available method for use with urea in feed, as follows: Sample Nos. 1 and 2, unsafe; Nos. 3, 4, 5 and 6 as borderline meals; and Nos. 7, 8 and 9, safe. Temperatures above 60° showed destruction of urease and were unsuitable for test purposes.

It is apparent from these results that, for both the pH-change and titration methods, the reaction at 50° or 60° gave a wider spread in urease values than heretofore obtained at room temperature, thereby reducing the effect of experimental error. However, the meals of low activity are still not well differentiated by either method. To differentiate meals of low activity, a conductimetric method was developed to improve on sensitivity and on reliability of results.

Urease converts a urea solution of relatively low electrical conduc-

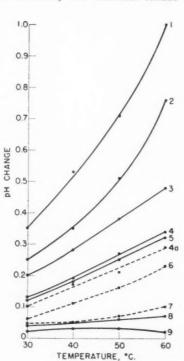


Figure 1. The effect of temperature on the urease activity of meals as measured by the pH-change method. Solid lines are for ground meals; broken lines are for meals on "as is" basis.

tivity to a solution of ammonium salts of high conductivity. The conductimetric method depends upon measuring this change in conductivity. This method was tested on a series of soybean oil meals prepared by mixing together an inactivated meal and an untoasted meal so that

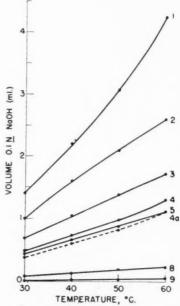


Figure 2. The effect of temperature on the urease activity of various meals as measured by the ammonia titration method. Solid lines are for ground meals; broken lines for meals on "as is" basis.

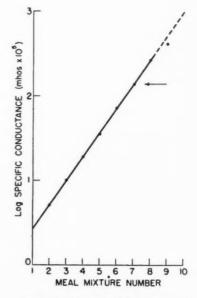
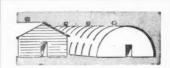


Figure 3. Urease activities measured by electrical conductivity of meal mixtures of known relative activities. Each meal mixture has twice the activity of the next lower number.



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Personal Service and Prompt Shipments from 32 Nationwide Branch Plants and Sales Offices each meal mixture had twice the activity of the mixture of next lower number. The results of these tests are given in Figure 3. The arrow on the graph indicates approximately the maximum activity to be found in toasted commercial meals and corresponds to samples 3 to 9 in Figures 1 and 2. By this method, it becomes possible to differentiate toasted meals of very low urease activity.

The titration method has been modified to make it useful in following the degree of heat denaturation of industrial types of soybean meal products of high urease activity. Figure 4 shows the titration

values obtained with meals from several varieties of soybeans on steaming at atmosphere pressure up to 30 minutes. As demonstrated in this set of curves the amount of urease activity often varied with varieties and with the same variety grown at different locations. Figure 5 shows the same data in which the decrease in urease activity with steaming is calculated as percentage of the original activity of the raw meal. This method of presenting the results reduces the differences due to variety and environment noted in Figure 4 and shows that the rate of decrease in activity is approximately the same for all meals. Also, the decrease in nitrogen solubility is compared with the decrease in urease activity in Figure 5.

During the study with raw meal it was observed that the relative urease activity was very low in the hulls and that the germ contained about twice the activity of the cotyledon. The results are shown in Table I, and indicate that urease ac-

TABLE I
Urease Activity in Soybean Seed Parts
Variety Hull Cotyledon Germ
Extracted

Extracted

Lincoln 0.1 6.1 11.2 6.0 Harosoy .. 0.2 7.6 13.3 7.4

tivity can be used to determine the freedom of hulls from meats in the dehulling operation.

Hemagglutinating Protein

For the past 3 years the Northern Branch has had a contract with the University of Minnesota, carried out under funds from the Research and Marketing Act of 1946, to investigate the toxic, hemagglutinating protein found in raw soybean meal. The

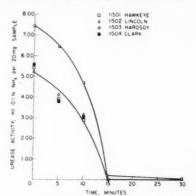


Figure 4. Urease activity for meals from four varieties of soybeans as affected by time of steam cooking at atmospheric pressure. Titration method.

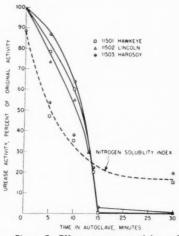


Figure 5. Effect on urease activity and nitrogen solubility index of steam cooking soybean meals at atmospheric pressure. Urease activities are calculated on a percentage basis, using the raw meal as 100%.

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work has been carried out under the direction of Dr. I. E. Liener, and he has succeeded in characterizing this toxic protein. His researchers indicate that the presence of this heatlabile protein is one of the reasons for toasting the meal to develop maximum nutritive value. He has been able to correlate increased chick-growth with the decrease of hemagglutinating activity of the meal by heat treatment. This correlation is shown in Table II which is taken from one of his recent publications (8).

TABLE II Chick-Growth vs. Hemagglutinating Activily of Soybean Oil Meal Samples Subjected to Various Degrees of Heat Treatment.

Day chi		
essure		
± 10.	.2 1,080	
± 11.	.6 190	
± 12.		
± 7.	.1 70	
± 8.		
± 9.	.6 24	
± 6	.8 3	
sure		
± 12	.3 296	
± 7.	.6 18	
± 4	.7 4	
± 8	.6 0	
± 5.	.0 0.	
± 12 ± 7 ± 8 ± 9 ± 6 sure ± 12 ± 7 ± 4 ± 8	3 105 1 70 26 .0 26 .6 24 .8 3 .3 296 6 18 .7 4 .6 0	

A measure of hemagglutinating activity of soybean oil meal appears to offer an alternative to the urease test for determining the optimum toasting to develop maximum nutritive value. As with the urease the maximum growth is observed when the test is still slightly positive.

Flash Desolventizer

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Figure 6. Diagram of flash desolventizer.

of soybean oil meal, it is necessary to have meal of high water solubility. To produce such a meal it is imperative to avoid heat denaturation of the protein during processing. One source of denaturation is in the desolventization step, or removal of residual solvent from spent flakes after solvent extraction. To avoid denaturation during this step, we have developed an efficient desolventizer which operates without reducing the nitrogen solubility of the spent flakes (9).

Figure 6 shows a diagram of this desolventizer and its simplicity is readily apparent. The incoming solvent-saturated flakes are met by a stream of superheated solvent and are carried through the desolventizing tube in a matter of 2-3 seconds during which time practically all of the residual solvent is vaporized. The solvent vapors are separated from the flakes in a cyclone, and the flakes are discharged with a moisture content of about 4% and a residual solvent content of only 0.2 to 0.8%. This desolventizer has been operating successfully in our pilot plant

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and appears to have industrial possibilities.

Market Potential Survey

Two years ago Dr. J. C. Cowan told you that Battelle Memorial Institute was conducting a survey on the market potential of drying oils for the U.S. Department of Agriculture. This contract work has now been completed and the survey has been published under the title of "The Market Potential for Fats and Oils in Drying-Oil Uses" as Marketing Research Report No. 90. It is available from the Superintendent of Documents, U.S. Government

Printing Office, Washington 25, D. C. for 65¢.

The survey contains a list of recommendations for research designed to recapture lost markets and to find new markets. One of these recommendations suggested the chemical modification of drying oils for use in the formulation of new products that will serve more effectively in various applications as film formers. One chemical modification which we have studied is the production of vinyl ethers.

Vinyl Ethers

The fatty acids of soybean oil are

readily converted to fatty alcohols by reduction with sodium, and these fatty alcohols are available commercially. We have developed a method of preparing the vinyl ethers of these fatty alcohols (10). The method involves bubbling acetylene gas into the alcohol containing a little alkali as a catalyst, and the reaction is complete within 1 to 2 hours. These vinyl ethers can be polymerized to viscous liquids having molecular weights in the range of 1,500 to 15,000. The unsaturated double bonds originally present in the soybean fatty alcohols are relatively unaffected by the polymerization step, but vinylation does rearrange the unsaturated bonds giving more reactive conjugated forms.

The resulting polymers are filmforming and have promise in vehicles for air-dried or baked finishes. Preliminary experiments show that hard, durable films can be obtained from soybean vinyl ether polymers by baking. These films have unusual resistance to alcohol and alkali, an important property of finishes for many industrial applications.

Other Research

Additional research on soybeans at the Northern Utilization Research Branch includes studies on the toxicity of trichloroethylene-extracted soybean oil meal, compositional studies on both the oil and the meal, fundamental investigations on the protein from soybeans, investigations on the composition and structure of sphingolipids from soybean phospholipides, studies on the chemical modification of soybean oil, studies on the cis-trans conjugation of soybean fatty acids, and studies designed to improve the stability of soybean oil for use in shortenings and cooking oils.

Part of this work is being carried out under contracts with the agricultural experiment stations of Iowa and Minnesota, the Hormel Institute of the University of Minnesota, and the University of Illinois.

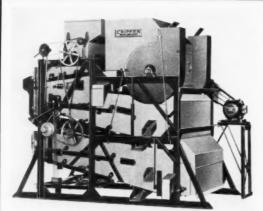
Literature Cited

- 1. McKinney, L. L., and Cowan, J. C., Soybean Digest, 16, (6), 14-16, and 16, (7), 14-18 (1956).
- 2. May, O. E., Soybean Digest, 4, (11), 39-40 (1944).
- 3. Hilbert, G. E., Soybean Digest, 6, (11), 33 (1946).
- 4. Hilbert, G. E., Soybean Digest, 7, (11), 42-48 (1947).
- 5a. Progress thru Research, 7, (3), 1 (1953).
 - 5b. Ibid, 10, (1), 8 (1956).
- 6. Croston, B. C., Smith, A. K., and Cowan, J. C., J. Am. Oil Chemists' Soc., 32, 279-282 (1955).
- 7. Smith, A. K., Belter, P. A., and Anderson, R. L., J. Am. Oil Chemists' Soc. 32 (in press).
- 8. Liener, I. E., Arch. Biochem. Biophys., 54, 223-231 (1955).
- 9. Belter, P. A., Brekke, O. L., Walther, G. F., and Smith, A. K., J. Am. Oil Chemists' Soc., 31, 401-403 (1954).

10. Teeter, H. M., Dufek, E. J., Coleman, C. B., and Cowan, J. C., Paper No. 31, Abst. of papers, 29th Meeting, Am. Oil Chemists' Soc., Oct. 10-12, 1955, Philadelphia, Pa.

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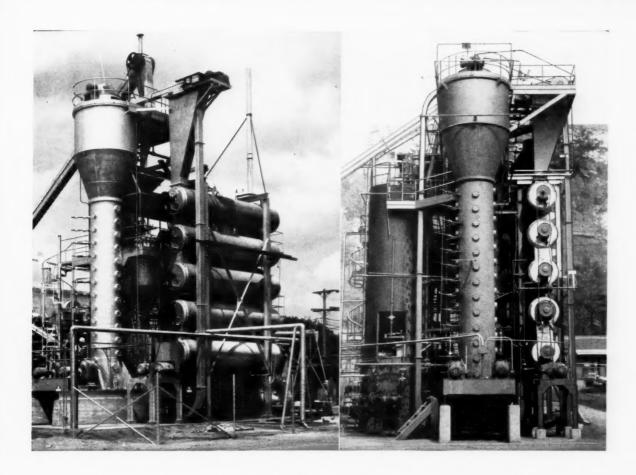
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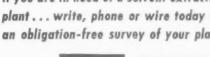
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PUBLICATIONS

Farmer's Part of Oil Dollar Down

MARGINS. The farmer's share of the margarine and shortening dollar, as expressed in the value of the soybean or cottonseed oil used in these products as compared with the value of the finished products, declined markedly in a 9-year period, according to a U. S. Department of Agriculture study.

The oil extracted from soybeans and cottonseed sold by U. S. farmers is used mainly in the margarine and shortening consumed in American households. And most margarine and shortening sold today is a blend of the two oils.

In November 1945 the farmer's share of 100 pounds of refined soybean oil used in margarine and shortening was \$11.85 in Chicago, based on the price he received for his soybeans; and in November 1954 it was \$11.58.

In November 1945 the retail value in Chicago of the margarine produced by 100 pounds of soybean oil was \$28.96 and of shortening \$25.63. But in November 1954 the value of the same amount of margarine had increased to \$32.87, and shortening to \$35.04.

In other words, the farmer's share shrank from 40.9% in margarine and 46.2% in shortening in 1945 to 32.8% in margarine and 35.6% in shortening in 1954.

Relative cottonseed oil value

showed a similar shrink in the same period.

From elevator or cotton gin, the soybeans or cottonseed are transported to the oil mill where they are processed. The crude oil produced is shipped, stored, refined, bleached, hydrogenated, and deodorized.

In making margarine the oils are mixed and several additives are incorporated, then the whole is blended and further processed. The finished product is packaged, shipped, stored, delivered to retailers, stored again, advertised, displayed, and sold to final consumers.

Shortening passes through a parallel but simpler procedure.

At many points in the marketing process, various other activities add to the marketing margin. These include the management function and clerical work, market analysis, financing and insuring.

The oil yield per bushel of soybeans increased roughly 25% during the 9-year period, due partly to improved strains of soybeans but largely to improved processing methods both at the oil mill and the refinery.

The farmer's return per pound for soybean oil decreased 4.6% in the period, but due to the increase in oil yield, he received 19% more for the oil recovered from a bushel of soybeans in November 1954 than he did in November 1945.

MARKETING MARGINS FOR SOYBEAN AND COTTONSEED OILS USED IN MARGARINE AND SHORTENING. AMS-109. A preliminary report prepared by Virginia Farnworth, Donald Jackson and Calvin C. Spilsbury. Agricultural Marketing Service, U.S. Department of Agriculture, Washington 25, D.C.

Fla. Inoculation Tests

INOCULATION. Two inoculation experiments on soybeans were performed at the Florida Suwanee Valley Experiment Station in 1954.

One was a strain variation study in which 10 single strains of Rhizobium japonicum and a mixture of the 10 strains were tested on Jackson soybeans. The other was one of a series of uniform legume inoculation experiments using Roanoke soybeans and including variables of source of inoculant, method of application, and nitrogen at seeding.

Six of the ten single strains of Rhizobium japonicum were significantly better than the uninoculated check. One strain from the USDA collection was outstanding, producing a yield increase of 123% over the check. Four other effective strains produced increases ranging from 53 to 91% over the check. A mixture of all strains showed an increase of 83%. Two strains were ineffective, one apparently being parasitic, on Jackson soybean plants.

Inoculation increased the yields of Roanoke soybeans 81% over the uninoculated, no nitrogen, check treatment. Ammonium nitrate at the rate of 34 lbs. N/acre had no effect on the inoculated soybeans but with uninoculated soybeans there was a slight but significant increase from this amout of nitrogen. There was no benefit from using syrup with the inoculant, and doubling the amount of inoculant did not produce any significant difference in yield of soybeans.

These studies emphasize the importance of inoculation for soybeans at the Florida Station, and particularly the need for more effective strains of *Rhizobium japonicum* to increase yields of soybeans grown in Florida.

SOYBEAN INOCULATION STUDIES IN FLORIDA. By Lewis W. Erdman and George D. Thornton before the Association of Southern Agricultural Workers, Atlanta, Ga.

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Weeds in Row Reduce Yields 10%

WEEDS can be an expensive pest, even in so-called clean cultivated row crops, according to results of cooperative research conducted since 1951 by Iowa State College and the U. S. Department of Agriculture. This work has demonstrated that inthe-row weed growth can reduce bean yields in soybeans by about 10%.

Extensive field trials at Ames, Iowa, not only established the high cost of natural weed infestations, but measured the damage caused by weeds under a variety of conditions of infestation.

These experiments, conducted by David W. Staniforth, Iowa Agricultural Experiment Station, and Charles R. Weber, employed cooperatively by the Station and by USDA's Agricultural Research Service, involved such typical plants as yellow foxtail, a grassy weed; velvet leaf and Pennsylvania smartweed, both broadleaved weeds; and the Hawkeye variety of soybeans. The weeds were planted singly and in combination in the row with soybeans, and then were thinned to stands of 3, 6, and 12 weeds per foot of row. Weeds were removed at a half-dozen specific intervals during the growth of

In general, this elaborate research program demonstrated that soybean yield reductions are proportional to the amount of weed growth, and that the combined above-ground

growth of soybeans and weeds is approximately the same as the above-ground growth of weed-free soybeans. The tests showed also that the presence of weeds delayed maturity of beans about one day, decreased the height of soybean plants about 2 inches, and increased lodging of soybean plants about 2 to 6%.

The scientists found that although weather is an important factor—in dry years weeds had little effect on soybean yields, and in years of ample moisture weeds reduced yields the most late in the season—weeds on the average began to affect soybean yields early in the season and caused progressively greater yield reductions as the crop matured.

In one experiment aimed at demonstrating the different effects of varieties and numbers of weeds on soybean yields, the scientists found that a foxtail infestation averaging six plants per foot of row during the entire growing season caused only a 2.6% yield reduction, but that 12 foxtail plants per foot of row caused an 11.1% yield reduction.

The two broadleaved weeds—velvet leaf and Pennsylvania smartweed—caused an average reduction in soybean yields of 8% when grown at a density of three plants per foot of row and 9.1% at a density of six plants per foot of row. In these tests the two weed species were not grown in combination—in other words, the soybeans had only one

weed species in a given treatment.

Because foxtail becomes established early in the season, it tends to reduce soybean yields during the entire growing period; smartweed, however, which is 2 to 3 weeks later than foxtail, tends to decrease yields the most late in the season (early September).

New Extraction Process Beneficial

A NEW "filtration-extraction" process for getting vegetable oil from oilseeds—developed by U. S. Department of Agriculture scientists—is now in commercial operation in one plant at Greenwood, Miss., and a second plant is under construction, the Department reports.

The filtration-extraction process was perfected by USDA's Agricultural Research Service at New Orleans, La., where success in pilotplant operations by the Southern Utilization Research Branch led the Mississippi Cottonseed Products Co. to test the process under commercial conditions.

After extensive trials at its Greenwood plant, which has been in operation over 2½ years, alternately handling cottonseed and soybeans, the company is installing a second filtration-extraction plant at Hollandale, Miss. This plant, due to be completed late this year, will be able to process 140-200 tons of cottonseed and 80-130 tons of soybeans per day.

The filtration-extraction process, suitable for small and medium-size mills, requires only rolling, cooking, and crisping of the prepared material before actual extraction of the oil with a petroleum solvent. A vacuum filter separates the oil-solvent mixture from the oilseed meal. The remaining operations follow conventional solvent-extraction methods.

The new process can handle many different oilseeds other than cottonseed and soybeans.

Huddleston in Hospital

H. H. Huddleston, Lamont, Miss,, retiring vice president and director of the American Soybean Association, was hospitalized for a heart attack in mid-August.

Mrs. Huddleston informed the Soybean Digest that the attack was a mild coronary, and that Mr. Huddleston was improving and expected to be out in 5 or 6 weeks.

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See 442 to 460 Million Bu. Crop

THE U. S. DEPARTMENT of Agriculture's Aug. 1 forecast pegged the 1956 soybean crop at 442.5 million bushels, up 71.4 million from last year. The yields look better than average in nearly all areas and the acreage is the largest of record.

Private estimates and general talk in the trade tended to place the crop at a little higher figure than USDA.

Most areas reported prospects in late August as good or better than 1955, according to our correspondents. Illinois, Indiana and Ohio, leading soybean states, all had an exceptional outlook. Moisture was adequate to more than adequate and the only question seemed to be one of weed control and lodging.

The crop in Iowa was spotted. General rains were received in August, but there was considerable hail damage, and reserve moisture was still low over much of the state. Missouri was also spotted with USDA rating the condition of the Missouri soybean crop as 87%.

The Midsouth had some dry weather and 100°-plus temperatures in August, but the outlook was improved by general rains the weekend of Aug. 18-19. An excellent crop is reported in Virginia and the crop is generally good on the East Coast.

Drouth still prevailed in Oklahoma, Kansas and Nebraska.

Reports from Soybean Digest crop

Arkansas. Paul C. Hughes, Farmers Soybean Corp., Blytheville (8-18): Unless we get rain soon we are going to be way low this year. I should say less than 15-bushel per acre average. Very hot and dry—103° yesterday. No real rain since June 8.

L. M. Hmphrey, R. L. Dortch Seed Farms, Scott (8-20): This could be SOYBEANS FOR BEANS
August 1956 Report, Crop Reporting Board, AMS, USDA
Yield per acre Productio

	Average	Indicated		Average		Indicated	
State	1945-54	1955	1956	1945-54	1955	1956	
				1,000	1,000	1,000	
		Bushels		Bushels	Bushels	Bushels	
New York		16.0	18.0	96	80	90	
New Jersey		19.0	21.0	386	684	840	
Pennsylvania		20.0	20.0	400	440	460	
Ohio		24.5	23.5	20.808	29,228	30,574	
Indiana	21.6	21.5	22.5	34,809	43,838	48,870	
Illinois	22.6	22.5	25.5	83,096	98,325	121,354	
Michigan		22.0	21.0	1,897	3,036	3,780	
Wisconsin	14.0	12.5	15.0	558	975	1,260	
Minnesota		19.5	20.0	18,961	43,934	53,120	
Iowa		19.5	19.0	37,202	43,582	50,179	
Missouri	17.6	17.5	22.0	20,616	33,950	45,100	
North Dakota	12.2	15.0	15.0	273	1,200	1,995	
South Dakota	15.0	11.5	11.0	971	2,794	2,541	
Nebraska	21.1	10.5	12.0	1.297	1,890	2,220	
Kansas	11.7	10.0	11.0	3,859	3,350	3,828	
Delaware		20.0	22.0	914	2.100	2.970	
Maryland	16.3	20.0	21.0	1.235	3.100	4.431	
Virginia	16.6	20.0	20.0	2.250	4.020	4,740	
North Carolina	15.2	15.5	18.0	4.049	5.068	7.128	
South Carolina		14.5	11.0	710	2,740	2,596	
Georgia	9.8	12.0	12.0	242	684	780	
Florida	117.8	22.0	20.0	1 206	792	860	
Kentucky	17.0	18.0	19.0	1,906	2,412	2,470	
Tennessee		18.0	20.0	2,737	4,500	5,400	
Alabama		23.0	21.0	1.128	2.162	1,995	
Mississippi		19.0	17.5	3.907	11.894	13,142	
Arkansas	16.8	18.0	19.0	8,226	21.906	26,866	
Louisiana		22.0	20.0	618	1.936	2,380	
Oklahoma		11.5	12.0	354	460	408	
Texas		13.0	20.0	15	26	180	
United States		19.9	21.1	253,653	371.106	442,557	
Short-time average.	_510						
average							

one of our best soybean years in some time. Crop condition good but some deterioration since last report due to heat. If weather moderates, total yield should be 20% or more above 1955. Weed control generally good but some fields have Johnsongrass and pigweed.

Illinois. Robert Pike, Pike Hybrid Corn Co., Pontiac (8-19): Crop condition looks very good. Moisture adequate. Weather ideal. Yield in Livingston County should be 2-5 bushels higher than 1955. Weed control spotty. Most fields fairly good.

Walter W. McLaughlin, Citizens

National Bank, Decatur (8-21): Crop condition and weather excellent. Yield 3 bushels per acre higher than last year. Heavy rains have caused weedy beans since beans have gone down

Indiana. K. E. Beeson, extension agronomist, Purdue University, Lafayette (8-22): Our reports and observations indicate normal maturity of crop. Condition good. Weather and moisture conditions generally okay. Yield looks even better than official 22½ bushels for state. Many weedy fields. Bean leaf beetle prevalent.

Chester B. Biddle, Remington

IOWA MILLING COMPANY

SOYBEAN PROCESSORS
Solvent Extraction

CEDAR RAPIDS, IOWA

(8-18): Heavy growth could delay maturity 5-10 days. Crop condition excellent. Weather and moisture conditions ideal. Yield up 10 bushels or more from 1955—40-bushel beans predicted. Stands are excellent. Good set of beans. Some weeds showing.

Iowa. Howard L. Roach, Plainfield (8-20): Maturity normal. Crop condition excellent. Weather and moisture conditions good. Yield outlook 110% of 1955.

Kansas: B. E. Henline, Soy-Rich Products, Inc., Wichita (8-20): Maturity 5-7 days late. Condition of crop poor. Lack of moisture and 100°-plus temperatures last 3 weeks put an end to most of soybeans in Sedgwick County. Yield outlook 5-10 bushels, same as 1955.

Louisiana. Mark H. Brown, East Carroll Grain Co-op, Lake Providence (8-18): Maturity 10 days early. Crop condition generally good. Some badly burned by hot sun and no rain. Showers scattered. Yield looks about same as last year. Farmers will all sell if price holds over \$2.

Minnesota. Howard E. Grow, Farmer Seed & Nursery Co., Faribault (8-22): Maturity normal to 1 week early. Crop condition excellent. Normal temperatures, above normal moisture. Yield equal to 1955. Total production up 10% due to increased acreage. Few weedy fields.

Missouri. Carver Brown, Laddonia (8-20): Unless we have hail or some other unexpected damage, we will harvest the largest soybean crop on record. Moisture conditions near perfect except for a bit of excess late June and early July which caused some weed damage. Yield outlook 25 to 28 bushels per acre. Total crop 50% above 1955.

Harold Lumsden, Essex (8-20): Crop condition 75% of normal. Very dry and hot. Yield prospect cut by

dry weather.

E. W. Trachsel, Helena (8-21): We had a most promising prospect up to last week in July when rainfall tapered off to light showers and high temperatures. This made us realize what can happen when there is a deficiency of subsoil moisture. I feel our yield has been cut in half. In case of ample rain later planted beans would still benefit. Beans on low ground are about as good as ever.

North Carolina. Paul Keller, Central Oil & Milling Co., Clayton (8-20): Maturity normal. Crop condition very good. Moisture ample. Total production 25% more than last year.

North Dakota. Floyd Poyzer, Amenia Seed & Grain Co., Amenia (8-20): Crop condition good. Weather dry. Yield outlook same as 1955.

Ohio. Glen McIlroy, Irwin (8-20): Crop condition good except more weedy fields than usual. Weather conditions since planting have been very favorable but plenty of moisture has also been favorable to weed growth. How much will weeds reduce yields? That is the question being discussed at this moment. Total production may be greater than 1955.

Oklahoma. Ralph S. Matlock, Oklahoma A & M College, Stillwater (8-20): All except irrigated beans showing drouth stress. Weather and moisture conditions best in the northeast but lacking moisture there. Severe moisture stress in Arkansas River bottoms. If new pods set after rains start in early September crop will be later than 1955. State average yield slightly lower than last year.

South Dakota. H. G. Miller & Son, Garden City (8-20): Never saw crop condition much better. Plenty of rain. Some lodging due to vigorous growth. Yield per acre will be much better than 1955. Weeds are a problem.

Tennessee. Tyler Terrett, West Tennessee Soya Mill, Inc., Tiptonville (8-21): We have a little better crop than 1955. Some above 100° weather last 2 weeks. Moisture is poor. Yield outlook about 20 bushels per acre. Fairly clean fields in some sections. Lot of grass.

Virginia. Louis Groh, Louis Groh & Son, Clay Bank (8-18): Crop condition very good. Weather and moisture very good. Yield outlook about same as 1955.

Ontario. R. H. Peck, River Canard (8-20): About 50% of crop looks very good. Balance is poor to fair. Moisture perfect to excessive in spots. Total yield may be about same. 15% more acres, 15% less yield.

DDT for Grasshoppers

GRASSHOPPERS are a widespread soybean pest, as well as on grass and sometimes corn. They are controlled best when young with sprays of modern insecticides. Other bean enemies in the South are Mexican bean beetles and the smaller leaf beetle—both stopped with sprays.

Where the Japanese beetle attacks soybeans, growers get good protection with DDT dusts or sprays. DDT or toxaphene applications also kill the ravages of blister beetles on soybeans in the South. DDT sprays or dusts or sprays of methoxychlor check the flea beetles in some areas, while alfalfa hoppers attacking soybeans are well controlled with parathion.

HOW DO YOU DEVELOP YOUR MARKET OPINIONS?

During the past six months our organization has had the privilege of studying a commodity market approach developed and utilized by one of the largest and most highly respected business firms in the United States. Much to our amazement we have observed this firm successfully take advantage of nearly all of the major price moves which recently occurred in soybeans, wheat, corn, rye, lard, soybean oil, cottonseed oil, and soybean meal. The approach is based on an extensive knowledge of underlying market conditions supplemented by an unusual method of chart interpretation of commodity price actions.

Until recently our impression of most chartests was that they were usually those personalities who sat around "Board Rooms" with holes in their trousers and pencil stubs behind their ears. We are now convinced, when weighed with logic and a knowledge of basic market fundamentals, charts can reveal underlying factors at work which may not be known in the general market, and that this particular charting approach is of great assistance in anticipating probable commodity price movements.

On March 12, 1956 we opened a trial account in a Columbus brokerage office with a deposit of \$5,000. The above mentioned market approach was utilized (supplemented by this same company's stop-loss formula). The units of trading were single contracts (5,000 bushels) in any one futures contract. When this account was closed out on June 8, 1956 the results of Chicago Board of Trade transactions were profits of \$4,050, losses of \$950 (the largest of which was \$225), and commission costs of \$411. In other words net profits of \$2,689, on a \$5,000 investment, in three months of trading. (No additional margin was ever placed in the account. The result of soybean trading was a profit of \$925.) If you are interested in receiving additional information about this commodity market approach—just mail us the following address form.

THE LESLIE ANALYTICAL ORGANIZATION

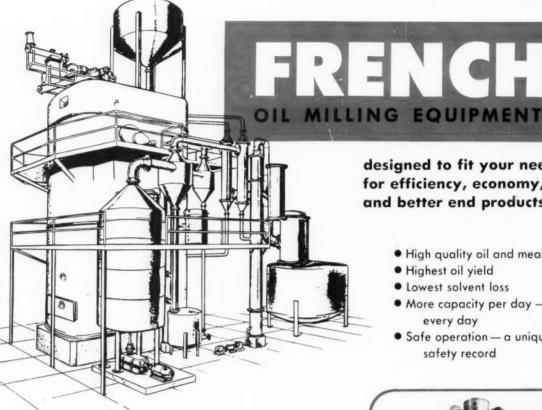
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Columbus 5, Ohio

Gentlemen: Please send me additional information about the commodity market approach mentioned in The Soybean Digest.

Name	2
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the Wisest westment soybean processing



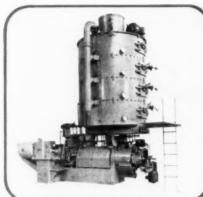
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- Safe operation a unique safety record

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French Mechanical Screw Press Excellent for direct or prepress operations. Latest style producing finished meal with around 2.50% residual oil and highest quality products.

LATE REPORTS

SUPPLY AND DISTRIBUTION of the 1954-55 soybean crops, reported by Agricultural Marketing Service (1,000 bu.)

	Soybe	eans
Item	1954-55	1955-56
Carryover ¹	1,336	9,957
Production	341,075	371,106
Total supply ²	342,411	381,063
Farm use including seed for season		28,000
Quantity remaining for processing,		
export, or carryover	317,411	353,063
Disappearance through July 313:		
Crushed for oil or processed4	210,407	241,456
Exported	53,144	561,966
Total	263,551	303,422
Balance on Aug. 1 for processing.		
export, or carryover	53,860	49,641
1Stocks as of Oct. 1. 2Imports negligible. 3Oct	ober thro	ugh July.
4No allowance is made for new crop crushin	gs prior t	o Oct. 1.
Data for July estimated.		

Soybeans: Supply and distribution, 1953-55 (1,000 bu.)

Stocks at beginning of period¹

		Interio	r	Ter-				
Year		mills	Crush-	mina	1		Pro-	
and		& ele-	ing	mar-	CCC	Total	duc-	Total
quarter	Farms	vaiors	plants	kets	3	stocks	tion	supply
1953-54								
OctDec	5,755	2,021	1,023	1,098	240	10,137	269,169	279,306
JanMar.	81,599	36,675	58,531	13,196	286	190,287		190,287
AprJune	37,312	16,862	52,297	11,461	36	117,968		117,968
July-Sept.	3,645	3,454	24,598	3,917	0	35,614		35,614
Season						10,137	269,169	279,306
1954-55								
OctDec	529	113	81	613	0	1,336	341,075	342,411
JanMar.	149,178	57,804	44,613	8,534	0	260,129		260,129
AprJune	113,914	40,623	17,549	3,914	0	176,000		176,000
July-Sept.	32,755	18,963	10,775	2,385	1,582	66,460		66,460
Season	******					1,336	341,075	342,411
1955-56								
OctDec	3,939	1,757	217	2,628	1,416	9,957	371,276	381,233
JanMar.	115,600	55,394	81,784	20,988	3	273,769		273,769
AprJune	59,834	26,979	67,366	22,193	0	176,372		176,372
July-Sept.	7,131	9,377	36,651	11,038	0	64,197		64,197
		D	STRIE	UTIO	N			

	L	ISTRIBUT	TON		
Year and quarter	Used for seed	Net exports	Crushed at mills	Feed and residual	Total disap- pearance
1953-54	2007		244444		pearance
OctDec		23,614	62,326	3,079	89,019
JanMar		7,858	58,903		72,319
AprJune		5.793	50,632	2,561	82,354
July-Sept		2,379	41,297	-9.398	34,278
Season		39,644	213,158	1,800	277,970
1954-55					
Oct,-Dec		27,500	65,114	-10,332	82,282
JanMar.	*******	12,325	60,785	11,019	84,129
AprJune		8,883	63,161	13,297	109,540
July-Sept		11,910	59,950	-15,357	56,503
Season		60,618	249,010	-1,373	332,454
1955-56					
OctDec		34,312		-1,499	
JanMar		10,982		12,077	
AprJune	26,948	512,367	72,090	770	112,175
1 Oct. 1 stocks in	all pos	itions incl	ude only	old crop	soybeans.
² Owned by Comm	odity Ci	edit Corp.	in transit	to ports.	3 Imports
negligible. 4 Mostl statistical errors in	y quan	tity fed, l	out includ	es waste,	loss and
duction, and quant	ity use	d for seed	estimated	by crop	reporting
board: exports and	quanti	ty crushed	from Bu	reau of the	e Census.

PROCESSING OPERATIONS. Reported by Bureau of the Census for June and July.

Primary products except crude oil at crude oil mill locations: production, shipments and transfers, and stocks, (tons)

July 1956-June 1956

	Prod	uction	a	ments nd asters	Oil mill stocks end of month	
Products	July 1956	June 1956	July 1956	June 1956	July 31, 1956	June 30, 1956
Soybean:						
Cake and meal	475,294	517,242	510,582	512,088	182,658	217,946
Flour	7,192	8,060	7,256	8,508	1,658	1,722
Lecithin(NA)—Not ava	1,141 ailable.	1,324	(NA)	(NA)	1,302	1,640

Soybeans: Net receipts, crushings, and stocks at oil mills, by states, July 1956-June 1956 (tons)

Net receipt	s at mills	Crushe	d or used	Stocks at mills		
July State 1956	June 1956	July 1956	June 1956	July 31, 1956	June 30, 1956	
Illinois119,410	114,646	248,832	238,262	307,983	437,405	
Indiana 56,114	47,420	46,409	72,706	95,397	85,692	
Iowa 51,676	73,449	107,883	103,397	119,062	175,269	
Kansas (1)	(1)	(1)	(1)	(1)	(1)	
Kentucky 4,717	2,255	10,203	13,895	21,717	27,203	
Minnesota 25,393	22,766	44,776	37,937	33,932	53,315	
Missouri 2,591	(1)	12,980	25,678	44,790	55,179	
Nebraska (1)	(1)	******		(1)	(1)	
North Carolina (1)	(1)	*****	(1)	(1)	1,756	
Ohio 41,057	31,240	68,740	71,209	98,182	125,865	
Texas (1)	(1)		(1)	(1)	(1)	
All other 4,660	21,920	71,515	103,818	72,742	137,841	
United States305,618	313,696	611,338	666,902	793,805	1,099,525	

 Included in "All other" to avoid disclosure of figures for individual companies.

Soybean products: Production and stocks at oil mill locations, by

July 1956 - June 1956

С	rude o	il (thou	sands c	f poun	ds)	Cake ar	nd meal	(tons)
State	Produ	iction !	Stocks	at mills	Prod	uction	Stocks	at mills
	July 1956				July 5 1956		July 11, 1956	June 30, 1956
U. S	228,348	248,636	98,575	93,288	475,294	517,242	182,658	217,946
Illinois	94,919	90,436	35,291	29,334	186,148	178,705	60,056	68,274
Indiana	17,802	27,084	13,762	16,829	38,033	57,580	50,273	65,044
Iowa	40,495	39,093	14,853	10,977	87,419	82,443	29,288	28,243
Kansas	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Kentucky	3,664	5,001	(1)	(1)	7,815	10,357	705	765
Minnesota	16,177	13,911	3,861	3,896	35,164	29,049	1,088	4,745
Missouri	4,318	9,635	4,965	3,810	9,143	20,459	2,804	5,558
Nebraska	*****	*****	(1)	(1)			(1)	(1)
N. Carolina	*****	(1)	(1)	(1)	*****	(1)	3,610	5,160
Ohio	25,428	25,948	6,648	4,876	54,852	56,139	5,196	2,659
Texas	*****	(1)	******	******	*****	(1)		(1)
All other	25,545	37,528	19,195	23,566	56,720	82,510	29,638	37,498
¹ Included i			" to a	void d	isclosu	re of f	igures	for in-

Mitchell, Hutchins & Co.

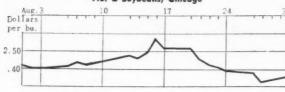
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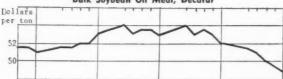
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DAILY MARKET PRICES

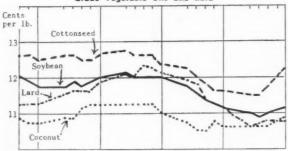
No. 2 Soybeans, Chicago



Bulk Soybean Oil Meal, Decatur



Crude Vegetable Oils and Lard



August Markets

WITH PROSPECTS for the new crop dominating the markets, cash soybeans and meal about held their own during August. Soybean oil dropped off 1¢. Beans, meal and oil all sold at the approximate levels of a year earlier.

Main factors in the markets were:

1—Prospects for a new record crop, variously estimated at 443-460 million bushels, up 70 to 90 millions from 1955. Markets strengthened for a few days after the release of U. S. Department of Agriculture's August crop estimate which was lower than some expected. But there were few signs that the usual August deterioration in the crop was taking place.

2—Nearness of the new crop harvest. Wet weather reports strengthened the markets and reports of favorable harvest weather weakened them. A few beans were being harvested in southern Indiana and southern Illinois by late August.

Bearish influences included:

1—Relatively large processor supplies—26 million as of July 1. Processors were not especially eager bidders. but few old crop beans were moving to market any longer from farm or country elevator.

2—Cautiousness of exporters as they waited to size up the new crop.

3—Report that Japan will impose a 10% import duty on soybeans Oct. 1.

4—Lagging sales of new crop meal and the belief that the usual tight situation will not develop in old crop meal at the end of the marketing year. Processors were noting that the prospective conversion on the new crop was not good.

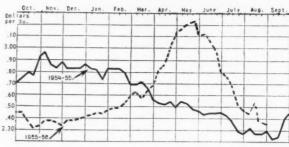
Strengthening the market:

1—Lack of interest by farmers in selling new crop beans.

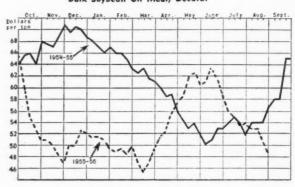
2—The nearness of the new crop price to the loan level.

TRENDS AT A GLANCE (Weekly Close)

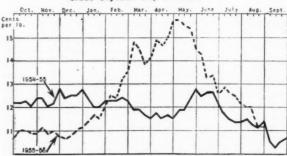
Near Futures Soybeans, Chicago



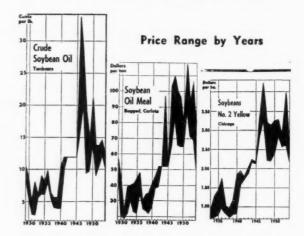
Bulk Soybean Oil Meal, Decatur



Crude Soybean Oil, Tankcars



BYPRODUCTS. The price of soybean fatty acids remained at 151/4¢ per pound during August. Acid soybean soap stocks delivered Midwest declined from 71/4¢ to 57/8¢, and raw soybean soap stock from 31/4¢ to 27/8¢.



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WASHINGTON DIGEST

Big Demand for 1956 Crop

SURPLUS? Big acreage and prospective bountiful yields are pushing oilseeds into the surplus crop category during the 1956-57 marketing year.

The soybean crop estimate probably will move a little higher this month than the 443-million-bushel crop forecast on Aug. 1.

A cotton crop closer to 14 million bales than the 13½ million bales forecast a month ago now appears probable.

These are indicated by preliminary crop information coming to USDA officials in late August.

The situation at this stage adds up to a great abundance of oilseeds in the coming marketing year — but nothing to get panicky about.

Soybean prices running below the \$2.15 a bushel price support are probable during harvest. A big loan program is indicated.

Oil prices should be pretty well maintained, officials think. Export demand will again be large, and domestic demand will be high, the increase in population alone accounting for something over 100 million pounds of oil a year.

There is already a backlog of Public Law 480 edible oil purchase authorizations approved, and new ones are in the works early this fall. The Administration will do everything it can, of course, to keep edible oils moving into export channels.

At the same time there is some official talk of the possibility CCC may have to take over some cotton-seed oil in price support operations this season. Soybeans, since they can be stored, are considered less of a problem than cottonseed so far as oil is concerned.

Crushing capacity is figured to be a price factor this year. The pressure will be off crushers to take oilseeds. Well over 300 million bushels are estimated to be available for crushing in the 1956-57 season. The spread between raw and finished product prices also should be wider than in recent years, officials believe.

MEAL. Soybean meal is calculated to be a drag on the market, at least for a part of the marketing year. Soybean meal will be lower relative to other meals than usual. A considerable volume of meal may have to be exported.

Output of over 7 million tons of soybean meal is probable in the coming year, officials estimate. Cotton-seed meal output should run 2½ million tons or more, depending on crop. A total of 10 million tons of cottonseed and soybean meal is considered a realistic estimate, with something like 750,000 tons of other meals, plus a little larger carryover this fall than last year.

Though as far as animal nutrition is concerned there would still



By PORTER M. HEDGE
Washington Correspondent for
The Soybean Digest

be a meal deficit, the picture for this fall adds up to a market surplus and low meal prices.

The outlook is not all bearish, however. The situation next spring and summer could have an important influence on prices, both for the latter half of the 1956 marketing year and the beginning of the 1957 season.

FACTORS. These are some of the factors which could affect soybean prices later this season:

1. Volume of beans that go into the loan program, and volume of deliveries to the government next spring.

2. Decision by USDA as to whether to export takeover beans next summer if deliveries are large.

3. Effectiveness of the soil bank program in cutting back cotton acreage in 1957.

4. Effectiveness of the soil bank in cutting back soybean acreage in 1957.

5. The outlook for expansion of hogs next year.

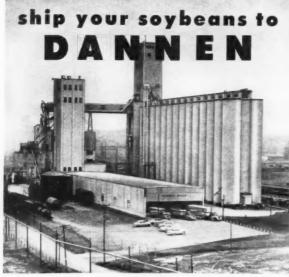
6. The level of price support for the 1957 crop of soybeans. Probability is that the parity base for soybeans next year will be a cent or so higher than in 1956. If the level of support should remain at 80%, the 1957 support might well be higher than in 1956.

These are all "iffy" situations, but they are mentioned as factors to take into consideration which could have a bolstering effect on soybean prices next spring.

TO FAS. Sidney Gershben, able fats and oils economist with the Agricultural Marketing Service, is moving this month to Foreign Agricultural Service. He will be associated with Edgar L. Burtis, chief of the Foreign Competition Branch of the Fats and Oils Division of FAS.

Gershben's new work will involve the making of economic and statistical analyses of fats and oils situations in competing countries, such as Argentina. The studies will cover not only commodities, but producing areas of the world as well.

The object is to develop a fats



Dannen Mills, Inc. St. Joseph, Mo.

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Soybean Oil
Meal . . .
Dannen Feeds



and oils "economic map" of the world which theoretically at least would show the situation, prospects and potential by areas and by commodities at any one time.

Gershben is best known professionally for his handling of the monthly AMS Fats and Oils Situation reports which have attracted considerable attention in recent years. He also has conducted a number of related statistical and economic studies.

Gershben will be succeeded in AMS by George W. Kromer, now in the fats and oils branch of Commodity Stabilization Service.

Feed Production up

Manufactured feed production during the first half of 1956 has exceeded by 5% the industry's output for the same period a year earlier. Total production of all types of manufactured livestock and poultry feeds for the 6-month period has been placed at 17,955,000 tons according to an announcement by the American Feed Manufacturers Association.

"Increases in commercial broiler and in turkey production accounted in large measure for the strong demand for manufactured feeds," W. E. Glennon, AFMA president explained. "Production of these two types of feed was up 27% for the half year."

More Suez Shipments

NORTHBOUND soybean shipments through the Suez Canal were 2.1 million bushels in May, making a total of 12 million bushels for the first 5 months of 1956, reports the U. S. Department of Agriculture. This is 15% above the 10.4 million bushels shipped through the Canal during the same period last year.

Vegetable oil shipments of 65,000 tons in May brought the 5-month total up to 270,000 tons, as compared with 261,000 tons during the same period in 1955.

- MARKET STREET -

We invite the readers of THE SOYBEAN DIGEST to use MARKET STREET for their classified advertising. If you have processing machinery, laboratory equipent, soybean seed, or other items of interest to the industry, advertise them here.

Rate 10c per word per issue. Minimum insertion \$2.00.

- WOULD LIKE TO INVITE PROspective soybean buyers and growers to inspect growing field of blended soybeans before combining time about Sept. 15. F. O. W. Hiller, Rt. 1, Ohio City, Ohio.
- FISCHBEIN PORTABLE BAG sewers shipped from stock same day your order is received, also 50 cone cases of thread. Muncy Mill Machinery Co., Muncy, Pa.
- DESIRE CONTACT MAN WITH soybean mill production and meal sales experience who would be interested in making moderate investment on secured basis and handling production and meal sales for fast growing medium-size mill in south. Write Box 319-S, Soybean Digest, Hudson, Iowa.
- FOR SALE—ONE B.F. GUMP BAG shaker. Used very little and in first class condition. Farmers Cotton Oil Co., Wilson, N. Car.
- FOR SALE—NEW AND USED feed mill equipment of all kinds, also used electric motors, starters. M. J. Benson Co., RFD No. 1, Box 377, Hopkins, Minn.
- WANTED BEAN AND SEED cleaner. Must be in good condition. Give details including capacity and price. Box 319-S, Soybean Digest, Hudson, Iowa.
- WANTED: FLAKING AND CRACKing rolls, meal coolers and driers and rollermills. Soybean Digest, Box 319-J, Hudson, Iowa.
- FOR SALE USED CLIPPER cleaner — Model 49DBB, 25 screens. Graymont Cooperative Assn., Graymont, Ill.
- WANTED—2 ANDERSON DUO-Expellers and bean driers. Communicate with Barvin Packing Co., Box 21027, Houston 26, Tex.

- FOR SALE—RICHARDSON AND Fairbanks scales, Niagara vibrating screen, Buckeye engine, Titusville boiler, meal coolers, condensers, Roots-Connersville blowers, heat exchangers, hammer mills, Eureka dust collectors, pumps, valves, electric motors and electrical starting equipment, A-1 condition. Contact Lee Atherton, Archer-Daniels-Midland Co., Investors Bldg., Minneapolis, Minn.
- TESTING EQUIPMENT: ALL makes, new and used, moisture testers. Also complete grain and seed testing and handling equipment and supplies. Write for free catalog. Burrows Equipment Co., 1316-D Sherman Ave., Evanston, III.
- INSIST ON BLACK NYLON brushes for Clipper Cleaners. Carried in stock and shipped from Minneapolis. New and used grain and seed cleaning equipment bought and sold. Len Jacobson Co., 3437 Fifth Avenue South, Minneapolis, Minn.
- FISCHBEIN PORTABLE BAG closers in stock for immediate shipment. Write for circular and prices. Douglas L. Mains Co., 1034 College Ave., Wheaton, Ill.
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- NEW AND USED PORTABLE FEED mills. H. L. Myers, Route 3, Alliance, Ohio. Phone 7044.

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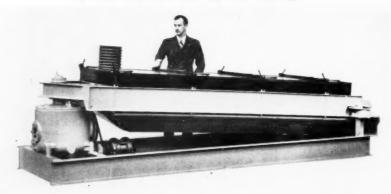
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While the screen box action stratifies the material and conveys it over the screen surface at an angle of inclination of only 4 degrees, the rubber balls, bouncing continuously and uniformly against the underside of the screen mesh, keep the entire area of the screen mesh open and

free from clogging, thus assuring a complete separation and a maximum capacity per square foot of screen area.

There are over twenty-two standard ROTEX Models, in various sizes, with from one to five screen surfaces so that it is always possible to obtain the proper size ROTEX for any capacity and separation requirement. Special Models, with variations to fit the customer's installation requirements, can also be furnished thus often eliminating expensive spouting or conveyors.

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IN THE MARKETS

FACTORY USE VEGETABLE OILS for May and June. Reported by the Bureau of the Census (1,000 lbs.)

Primary materials: Factory production and consumption, and factory and warehouse stocks, June 1956 - May 1956

		Factory production		ctory mption	Factory and warehouse stocks		
Cottonseed, crude	June 1956 54 412	May 1956 91,144		1956	June 30 1956 38,162	1956	
Cottonseed, refined		112,797			327,590		
Peanut crude1	10.182	13,403	6,833	9,017	19,089	16,243	
Soybean, crude	248,636	273,348	222,786	269,979	179,630	172,649	
Soybean, refined	205,257	249,054	208,299	229,034	116,643	123,747	
(100% basis)	16.539	20.458	12,092	14,897	49.009	50,305	

Factory consumption of vegetable oils, by uses, during June 1956
Edible products Inedible products

	Shortening	Margarine	Other edible	Soap	Paint and Varnish	Lubricants and similar oils1	Other inedible
Cottonseed, refined	10.207	2.039	2,306				245
Soybean, crude				36	357		2,037
Soybean, refined	32,522	4,808	4,424		6,860	49	6,726
Foots, vegetable, raw acidulated (100% ba				2,165	162	613	922
Hydrogenated vegeta	ble oils,	edible:					
Cottonseed	9,935	15,086					
Soybean	26,274	42,378	1,603				
Other	2,561	1,151					
Includes quantities							

*Includes quantities consumed in lubricants, greases, cutting oils, core oils, brake fluids, and metal working. *Includes quantities consumed in chemicals, linoleum, oilcloth and animal feeds. Vegetable foots used in animal feeds totals 235,000 pounds.

Consumption of fats and oils in fat splitting

		1956		1955	
		J	anJune Cumula-		nJune umula-
Soapstocks	June	May	tive	June	tive
Vegetable Foots	7,577	10,270	54,722	12,061	58,820
Source: II & Census 1	Rureau				

EXPORTS. U. S. exports of soybeans and soybean oil for June. Preliminary data by Foreign Agricultural Service, U. S. Department of Agriculture.

Soybeans	3,703,608 bu.
Soybean oil:	
Crude	13,318,185 lbs.
Refined but not further processed	
Refined, deodorized and hydrogenated	25,104,253 lbs.

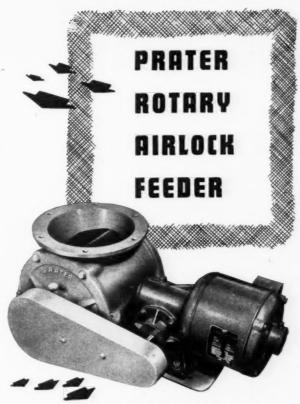
Converted to a soybean equivalent basis the exports for June amounted to 7.617,078 bushels.

Soybeans: Inspections for overseas export by ports and country of destination July 16-Aug. 17. Reported by Agricultural Marketing Service (1,000 bu.)

	Phila- elphia	Balti- more	Norfolk	New Orleans	Port Allen, La.	Total
Japan 2	0,533	64,210	21,211	770,682	681,131	1,557,767
Korea				129,048		129,048
Holland 2	6,133	116,667	18,667	210,883		372,350
Germany				130,666		130,666
Belgium		70,000		155,283		225,283
Norway			130,666			130,666
Formosa				231.931		231.931
Total	16,666	250,877	170.544	1,628,493	681,131	2,777,711
Total exports bushels compa						

EXPORTS. Exports of both soybean and cottonseed oils from the United States during the first half of 1956 were at an alltime record rate, according to preliminary estimates, reports the U. S. Department of Agriculture.

With soybean oil exports in June maintaining the high rate of previous months, the January-June total of 253 million pounds was more than 12 times the figure recorded for the first half of 1955. Including estimated January-June soybean exports of 23.4 million bushels—which exceeded the previous 6-month record of 21.2 million bushels in 1955—the annual rate of exports of oil and beans in bean equivalent set during the first



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semester is over 90 million bushels, compared with record high total exports of 80 million bushels in 1955.

Cottonseed oil exports in June exceeded June 1955 shipments by 10%, and the January-June total of 371 million pounds was nearly one-fourth greater than in the first half of last year. At this rate, total 1956 exports of cottonseed oil would exceed by over 100 million pounds the record annual level of about 630 million pounds set in 1954 and 1955.

Though exports of oilcakes and meal in June dropped to 80% of the previous June's exports, an all-time record volume of 260,000 short tons was shipped abroad during the first 6 months, exceeding the previous high set in January-June 1955 by over 70%. The relative increase in exports of linseed cake and meal is marked, although soybean cake and meal continued to make up the bulk of the shipments of cake and meal.

Cottonseed Oil, Soybean Oil, Oilcakes and Meals: Preliminary estimates of U. S. exports in June and January-June, 1956, and actual exports, June and January-June, 1955

		1955		1956
Commodity	June	Jan-June	June	Jan-June
		(Actual)	(Est	timated)
		Million	pound	is
Cottonseed oil, refined	56.3	204.2	34.4	170.2
further processed	4.8	45.3	9.2	84.7
Cottonseed oil, crude	1.5	49.4	25.4	115.8
Total cottonseed oil	62.6	298.9	69.0	370.7
Soybean oil, refined			2.6	39.9
Soybean oil, refined and				
further processed	1.5	5.1	22.9	178.9
Soybean oil, crude		2.5	13.4	34.4
Total soybean oil		18.6	38.9	253.2
		Thousand	short	tons
Cottonseed cake and meal	16.4	58.3	2.6	32.9
Linseed cake and meal	3.0	13.0	5.6	49.6
Soybean cake and meal	15.7	80.7	19.9	177.4
Total cake and meal!	35.1	152.0	28.1	259.9
1 79 1 10				

 $^{\rm I}$ Excluding peanut cake and meal, exports of which have been negligible since 1952.

United States: Soybean and soybean oil exports in terms of dollar

value, annual 1950), 1954, and	1955. (1,000 dol	lars)
Country of destination	1950	1954	1955
Japan	11,858.3	51,003.1	57,446.7
Western Germany	25,199.9	20,283.6	28,041.0
Canada	13,032.8	1 25,288.0	1 21,936.9
Netherlands	4,476.4	16,015.3	20,757.2
Taiwan	1.193.8	8,474.3	10,878.7
Spain	8.472.5		10,653.0
Denmark	4.165.2	3,993.8	10,100.5
France	5.941.1	2,130.4	7,750.6
United Kingdom		3,969.1	6,035.4
Israel	1.131.5	3,075.0	5,478.3
Belgium	2,693.8	706.8	3,567.8
Italy	5.313.9	1 136.9	70.2
Italy Greece	398.6	1	3,749.4
Norway Cuba Switzerland	757.2	1,966.9	2,234.9
Cuba	2.172.5	457.3	1 947.6
Switzerland	816.8	1.166.8	1,072.0
Australia	2.561.0	33.6	1 7.0
Sweden	3.3	1.372.9	.6
Finland		490.6	480.0
Philippine Republic	424 7	329.3	183.3
Korean Republic		582.2	317.9
French Morocco		760.9	
Netherlands Antilles		1 5.7	1 102.7
Haiti		1 27.8	1 350.7
Iceland	445.7	12.2	53.5
Hong Kong	3.2	331.6	00.0
Hong Kong Algeria	0.6	001.0	293.4
Union of South Africa	47.3	105.4	98.3
Union of South Africa Venezuela Colombia	146.7	34.8	1 46.5
Calambia	42.0	8.5	170.7
Chile	55.3	69.5	68.4
Nonie		37.1	133.3
Mexico Trieste	154.5	31.1	100.0
Trieste	154.5		80.1
Tangier		16.6	24.6
Panama	87.3	2010	
Peru	104.2	2.3	1.0
Surinam Equador Costa Rica	67.2	2.3	26.4
Equador	56.7		20.4
Costa Rica	28.8	1.4	36.0
New Zealand Others	1.2	3.2	13.8
Others	151.8	46.0	
Total .	92,797.7	142,941.2	193,501.8

Includes estimates based on a sample of low-value shipments. Compiled from official reports of the Bureau of the Census, USDA, Foreign Agricultural Service, Fats and Oils Division

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Japan: Soybean allocation by purpose and by source for the first half of Japanese fiscal year 19561

Purpose	Global ² 1,000		Bra:		Total 1,000	
	metric		metric		metric	
	tons	bushels	tons	bushels	ions	bushels
Oil crushing	189.0	6.944.5	5.0	183.7	194.0	7,128.2
Food	75.0	2,755.7	5.0	183.7	80.0	2,939.4
Feed	46.0	1,690.2			46.0	1,690.2
For export-						
ing oil3	10.0	367.4			10.0	367.4
Total	320.0	11,757.8	10.0	367.4	330.0	12,125.2

April-September 1956. ² Free competition between countries. ³ Oil processed from soybeans of this category has to be exported. Course Ministry of Agriculture and Forestry (unofficial). The above table does not include the soybeans to be imported estimated at 20,000 tons (.7 million bushels), in exchange for exported soybean products.

Japan: Government allocation of foreign funds for importing soybeans for the second half of

		panese fi			•			
	Consu	mer	Impo	rter	T	Total		
	alloca		alloca					
	1,00	0	1,000			1,000		
	metric		metric		metric			
	tons	bushels	ions	bushels	ions	bushels		
First licensing								
Oil crushing	134.0	4,923.6	57.4	2,109.1	191.4	7,032.7		
Food use	36.8	1.352.2	15.8	580.5	52.6	1,932.7		
Subtotal	170.8	6,275.8	73.2	2,689.6	244.0	8,965.4		
Feed			45.0	1,653.4	2 45.0	1,653.4		
Total	170.8	6,275.8	118.2	4.343.0	289.0	10,618.8		
Second Licens	sing							
Oil crushing	14.0	514.4	6.0	220.5	20.0	734.9		
Food use	18.2	668.7	7.8	286.6	26.0	955.3		
Subtotal	32.2	1.183.1	13.8	507.1	46.0	1.690.2		
Feed						***************************************		
Total	32.2	1,183.1	13.8	507.1	3 46.0	1,690.2		

October 1955-March 1956. ²All of the 45,000 tons was not sold by the government until late March 1956. ³All of the 46,000 tons was not licensed until late March 1956. Source: Ministry of Agriculture and Forestry.

MEAL, OIL EXPORTS. Exports of soybean oil continued at a record rate in May, according to preliminary Census Bureau data adjusted by the Foreign Agricultural Service. Estimated soybean oil exports of 48.4 million pounds were nearly 13 times those of May 1955 and the January-May total of 14 times that of the same period in 1955.

Cottonseed oil, too, maintained a high rate of export. The quantity of cottonseed oil exported during the first 5 months of this year was nearly 90 million pounds greater than that of soybean oil.

While May exports of soybean cake were three times the May 1955 level, they were nearly 8,000 tons less than in April. (Exports of soybeans in May are estimated at 4.5 million bushels, based on inspection reports, bringing the 5 months' total to 20.5 million bushels.)

Cottonseed oil, soybean oil, oilcakes and meals: Preliminary estimates of United States exports in May and January-

May	, 1956 ar	nd 1955		
	1:	1956		955
	May (Est	Jan-May imated)		Jan-May
		Million	pound	S
Cottonseed oil, refined	22.5	136.0	0.6	147.9
Cottonseed oil, refined and				
further processed	17.3	76.0	17.3	40.5
Cottonseed oil, crude	10.7	90.6	2.6	47.9
Total cottonseed oil	50.5	302.6	20.5	236.3
Soybean oil, refined	5.3	37.4	2.8	9.8
Soybean oil, refined and				
further processed	37.7	156.0	0.6	3.6
Soybean oil, crude	5.4	21.3	0.4	2.0
Total soybean oil .	48.4	214.7	3.8	15.4
		Thousand she	ort tons	
Cottonseed cake and meal	4.1	30.8	10.2	41.9
Linseed cake and meal	4.1	44.4	3.7	10.0
Soybean cake and meal	229	157.9	7.7	65.0
Total cake and meal	31.1	233.1	21.6	116.9

Excluding peanut cake and meal, exports of which have been negligible since 1952.

P. L. 480. The U. S. Department of Agriculture reported that during the period July 1, 1955, through June 30, 1956, exports under Title I of Public Law 480 totaled 315 million pounds of cottonseed oil and 163 million pounds of soybean oil.

It is anticipated that some additional quantities remain to be reported.

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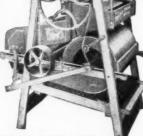
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,	0.000						

Commodity	May-J Total sh	une 1956 ipments	June 30, 1956 Total shipments		
	metric tons	1,000 lbs.	metric tons	1,000 lbs.	
Cottonsed oil	37,086	81,761	142,970	315,195	
Soybean oil	21,952	48,397	74,037	163,224	
Lard	15,721	34,658	45,703	100,757	
Nonfat dry milk	2,385	5,256	5,006	11,037	
Linseed oil	303	668	1,456	3,210	

STOCKS. Agricultural Marketing Service's commercial grain stocks reports for close of business on Friday and Saturday preceding date of report (1,000 bu.)

U. S. soybeans in store a	July 24 ind afloa				
Atlantic Coast	630	451	317	312	200
Gulf Coast	931	415	676	829	848
Northwestern and Upper Lake	1,015	558	363	197	124
Lower Lake	6,072	5,099	4,158	3,490	2,918
East Central	137	123	51	57	75
West Central					
Southwestern & Western	. 346	291	198	155	112
Total current week	9,131	6,937	5,763	5,040	4,277
Total previous week (revised)	10,660	9,176	6,833	5,763	5,035
Total year ago	1,761	2,662	2,285	2,337	2,788
U. S. soybeans in store a	nd afloa	t at Ca	nadian	market	s
Total aureont wook	0		0	0	122

Total current week	. 0	0 0	0	133
Total year ago	0	0 73	10	0
Total North American	commercia	l soybean	stocks	
Current week	0 131 6 0	37 5 763	5.040	4 410

Year ago 1.761 2.662 2.358 2.347 2.788
Primary receipts (1,000 bu.) of soybeans at important interior

poir	nts for wee	k endin	g:		
	July 21	July 27	Aug. 3	Aug. 10	Aug. 17
Chicago	832	238	149	97	7
Indianapolis	4	29	67	124	65
Kansas City	7	2	2		2
Minneapolis	30	46	29	10	13
Omaha	. 38	5	******		
Peoria	. 53	37	13	21	31
Sioux City	2	4	7	4	
St. Joseph					2
St. Louis		2		2	
Toledo	45	29	7	4	9
Totals	1.011	393	274	262	129
Last week	920	1.011	393	274	262
Last year	1,235	2,460	1.544	1,418	1,204
Total Chicago					
soybean stocks	5,891	5,039	4,100	3,443	2,864

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A WINNING TEAM—Phillips Technical Service and

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It's hard to beat this combination . . . high quality solvents teamed up with Phillips practical experience and know-how in the solvent field. Phillips 66 Solvents are free from harmful contaminants. Special handling and storage facilities keep them clean and pure. The narrow

boiling range assures no light ends, no heavy residues. You get high recovery of oil and solvent. Find out how the Phillips team . . . high quality solvents plus expe. 'echnical assistance . . . can simplify your plant operations and increase your profits.

PHILLIPS PETROLEUM COMPANY

Special Products Division

Bartlesville, Oklahoma



New 5-Step Program Helps You Cut Costs—Market Early



46 gilts and 26 sows farrowed 792 live pigs last May underpractical farm conditions at the Wayne Research Farm. That's an average of 11 pigs per litter.* Average weight per pig—3.03 pounds.

*(national average-6.9 pigs per litter).

New Wayne Hog Feeding Program Gives Low-Cost, High-Speed Gains

There are five definite stages in the growth of pigs and getting them to market. Supplying the exact nutritional needs in each stage gives faster gains . . . cuts total feed costs. Feeding studies on

more than 4,000 pigs at the Wayne Research Farm helped Wayne to develop a completely new 5-step low-cost, high-speed hog feeding program—built to give you these benefits...



for Bigger, Stronger Litters . . . feed Wayne Brood Sow Supplement. Proved to be a real pigmaker at the Wayne Research Farm. Supplies the vitamins, minerals, and proteins lacking in farm grains but needed by sows during gestation and nursing.



for Growing Shoats at Lower Cost ... feed Wayne Pig Balancer. A new specially fortified supplement for 50 to 100 lb. pigs. Grows pigs and shoats rapidly and economically. Properly balances farm grains to produce fast, low-cost gains.



for Pre-Starting Baby Pigs... feed Wayne Tail Curler Rockets. Powerful, sugar-sweet pellets start baby pigs fast as a rocket. In feeding tests, Rocket fed pigs were over 10% heavier at weaning time than pigs that did not get Rockets.



for Earlier Marketing ...
feed Wayne Hog Balancer—a
powerful supplement specially
blended for hogs over 100 lbs.
Supplies nutrients lacking in farm
grains at low-cost. Promotes fast-

er gains-earlier marketing.

3.

for Heavier Pigs at Weaning... feed Wayne Tail Curler—an improved, more palatable Tail Curler that speeds pigs on to heavier weaning weights even faster than ever before. Highly fortified. Contains amazing growth stimulating powers. **Special Feeds for Special Needs**

Wayne Hog Worming Mixture: Over 95% effective for removing large roundworms in Wayne tests. Easy to feed. Gives pigs an extra nutritional boost—helps keep them gaining and on-feed without set-back.

Wayne H-A-D Krums: When enteritis or scours indicate the need for a High-Antibiotic Diet, feed WAYNE H-A-D Krums for 3 to 5 days.



See your Wayne Feed Dealer today for

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HAYNE FEEDS

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